
A CONSPECTUS OF *MYRCIA* SECT. *AULOMYRCIA* (MYRTACEAE)¹

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ABSTRACT

An annotated conspectus of 124 species is presented for *Myrcia* DC. sect. *Aulomyrcia* (O. Berg) Griseb. This list is published for use as a basis for future revisionary work and presents the species of this evolutionary group together for the first time. Publication and type information, habitat and distribution, preliminary conservation assessments, and diagnostic notes are provided for each species. In transferring species of *Calyptanthus* Sw. and *Marlierea* Cambess. to *Myrcia*, 28 new combinations are made: *Myrcia areolata* (McVaugh) E. Lucas & C. E. Wilson [= *Marlierea areolata* McVaugh], *Myrcia biptera* (Amshoff) E. Lucas & C. E. Wilson [= *Marlierea biptera* Amshoff], *Myrcia caesariata* (McVaugh) E. Lucas & C. E. Wilson [= *Marlierea caesariata* McVaugh], *Myrcia cana* (McVaugh) E. Lucas & C. E. Wilson [= *Marlierea cana* McVaugh], *Myrcia caudata* (McVaugh) E. Lucas & C. E. Wilson [= *Marlierea caudata* McVaugh], *Myrcia convexivenia* (B. Holst) E. Lucas & C. E. Wilson [= *Marlierea convexivenia* B. Holst], *Myrcia ensiformis* (McVaugh) E. Lucas & C. E. Wilson [= *Marlierea ensiformis* McVaugh], *Myrcia excoriata* (Mart.) E. Lucas & C. E. Wilson [= *Marlierea excoriata* Mart.], *Myrcia guildingiana* (Griseb.) E. Lucas & C. E. Wilson [= *Psidium guildingianum* Griseb.], *Myrcia insignis* (McVaugh) E. Lucas & C. E. Wilson [= *Marlierea insignis* McVaugh], *Myrcia karuaiensis* (Steyerm.) E. Lucas & C. E. Wilson [= *Aulomyrcia karuaiensis* Steyerm.], *Myrcia ligustrina* (McVaugh) E. Lucas & C. E. Wilson [= *Marlierea ligustrina* McVaugh], *Myrcia lituatinervia* (O. Berg) E. Lucas & C. E. Wilson [= *Myrciaria lituatinervia* O. Berg], *Myrcia maguirei* (McVaugh) E. Lucas & C. E. Wilson [= *Marlierea maguirei* McVaugh], *Myrcia mcvaughii* (B. Holst) E. Lucas & C. E. Wilson [= *Marlierea mcvaughii* B. Holst], *Myrcia multiglomerata* (Amshoff) E. Lucas & C. E. Wilson [= *Marlierea multiglomerata* Amshoff], *Myrcia neuwiedeanae* (O. Berg) E. Lucas & C. E. Wilson [= *Rubachia neuwiedeanae* O. Berg], *Myrcia obversa* (D. Legrand) E. Lucas & C. E. Wilson [= *Marlierea obversa* D. Legrand], *Myrcia pudica* (McVaugh) E. Lucas & C. E. Wilson [= *Marlierea pudica* McVaugh], *Myrcia rugosior* (McVaugh) E. Lucas & C. E. Wilson [= *Marlierea rugosior* McVaugh], *Myrcia scytophylla* (Diels) E. Lucas & C. E. Wilson [= *Marlierea scytophylla* Diels], *Myrcia skortzoviana* (Mattos) E. Lucas & C. E. Wilson [= *Marlierea skortzoviana* Mattos], *Myrcia suborbicularis* (McVaugh) E. Lucas & C. E. Wilson [= *Marlierea suborbicularis* McVaugh], *Myrcia subulata* (McVaugh) E. Lucas & C. E. Wilson [= *Marlierea subulata* McVaugh], *Myrcia sucrei* (G. M. Barroso & Peixoto) E. Lucas & C. E. Wilson [= *Marlierea sucrei* G. M. Barroso & Peixoto], *Myrcia umbraticola* (Kunth) E. Lucas & C. E. Wilson [= *Marlierea umbraticola* (Kunth) O. Berg], *Myrcia uniflora* (McVaugh) E. Lucas & C. E. Wilson [= *Marlierea uniflora* McVaugh], and *Myrcia ventuarensis* (B. Holst) E. Lucas & C. E. Wilson [= *Marlierea ventuarensis* B. Holst]. The following 21 replacement names are created: *Myrcia argentigemma* E. Lucas & C. E. Wilson, *M. aulomyrcioides* E. Lucas & C. E. Wilson, *M. chonodisca* E. Lucas & C. E. Wilson, *M. holstii* E. Lucas & C. E. Wilson, *M. neobuxifolia* E. Lucas & C. E. Wilson, *M. neocuprea* E. Lucas & C. E. Wilson, *M. neodimorpha* E. Lucas & C. E. Wilson, *Myrcia neoestrellensis* E. Lucas & C. E. Wilson, *M. neoglabra* E. Lucas & C. E. Wilson, *M. neoimperfecta* E. Lucas & C. E. Wilson, *M. neomacrophylla* E. Lucas & C. E. Wilson, *M. neomontana* E. Lucas & C. E. Wilson, *M. neoobscura* E. Lucas & C. E. Wilson, *M. neoregeliana* E. Lucas & C. E. Wilson, *M. neoriedeliana* E. Lucas & C. E. Wilson, *M. neoschomburgkiana* E. Lucas & C. E. Wilson, *M. neosuaveolens* E. Lucas & C. E. Wilson, *M. neotomentosa* E. Lucas & C. E. Wilson, *M. neotovarensis* E. Lucas & C. E. Wilson, *M. neovelutina* E. Lucas & C. E. Wilson, and *M. neovorticillaris* E. Lucas & C. E. Wilson. Sixty-four lectotypes are newly designated for the following names: *Aulomyrcia blanchetiana* O. Berg [= *Myrcia blanchetiana* (O. Berg) Mattos], *Aulomyrcia buxifolia* O. Berg [= *Myrcia multiflora* DC.], *Aulomyrcia cambessedeanae* O. Berg [= *Myrcia coelosepala* Kiaersk.], *Aulomyrcia diaphana* O. Berg [= *Myrcia diaphana* (O. Berg) N. Silveira], *Aulomyrcia divaricata* O. Berg [= *Myrcia rufipila* McVaugh], *Aulomyrcia egensis* O. Berg [= *Myrcia egensis* (O. Berg) McVaugh], *Aulomyrcia eumecephylla* O. Berg [= *Myrcia eumecephylla* (O. Berg) Nied.], *Aulomyrcia gigantea* O. Berg [= *Myrcia gigantea* (O. Berg) Nied.], *Aulomyrcia goyazensis* O. Berg [= *Myrcia multiflora* DC.], *Aulomyrcia insularis* (Gardner) O. Berg var. *punctata* O. Berg [= *Myrcia insularis* Gardner], *Aulomyrcia mathewsiana* O. Berg [= *Myrcia mathewsiana* (O. Berg) McVaugh], *Aulomyrcia pallida* O. Berg [= *Myrcia multiflora* DC.], *Aulomyrcia pohliana* O. Berg [= *Myrcia pubiflora* DC.], *Aulomyrcia pyrifolia* (Desv. ex Ham.) O. Berg var. *robusta* O. Berg [= *Myrcia pyrifolia* (Desv. ex Ham.) Nied.], *Aulomyrcia racemosa* O. Berg [= *Myrcia racemosa* (O. Berg) Kiaersk.], *Aulomyrcia rorida* O. Berg [= *Myrcia myrtillifolia* DC.], *Aulomyrcia rostrata* O. Berg [= *Myrcia neorostrata* Sobral], *Aulomyrcia salzmännii* O. Berg [= *Myrcia decorticans* DC.], *Aulomyrcia sphenoides* O. Berg [= *Myrcia sphenoides* (O. Berg) Mattos], *Aulomyrcia*

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stictophylla O. Berg [= *Myrcia stictophylla* (O. Berg) N. Silveira], *Aulomyrcia subobliqua* O. Berg [= *Myrcia subobliqua* (Benth.) Nied.], *Eugenia ferruginea* Poir. [= *Myrcia ferruginea* (Poir.) DC.], *Eugenia micropetala* Mart. [= *Myrcia micropetala* (Mart.) Nied.], *Eugenia quitarensis* Benth. [= *Myrcia quitarensis* (Benth.) Sagot], *Eugeniopsis riedeliana* O. Berg [= *Myrcia neoriedeliana* E. Lucas & C. E. Wilson], *Marlierea cuprea* Amshoff [= *Myrcia neocuprea* E. Lucas & C. E. Wilson], *Marlierea dimorpha* O. Berg [= *Myrcia neodimorpha* E. Lucas & C. E. Wilson], *Marlierea estrellensis* O. Berg [= *Myrcia neoestrellensis* E. Lucas & C. E. Wilson], *Marlierea excoriata* Mart. [= *Myrcia excoriata* (Mart.) E. Lucas & C. E. Wilson], *Marlierea glabra* Cambess. [= *Myrcia neoglabra* E. Lucas & C. E. Wilson], *Marlierea grandifolia* O. Berg [= *Myrcia neoglabra* E. Lucas & C. E. Wilson], *Marlierea macrophylla* Amshoff [= *Myrcia neomacrophylla* E. Lucas & C. E. Wilson], *Marlierea obscura* O. Berg [= *Myrcia neoobscura* E. Lucas & C. E. Wilson], *Marlierea parviflora* O. Berg [= *Myrcia excoriata* (Mart.) E. Lucas & C. E. Wilson], *Marlierea regeliana* O. Berg [= *Myrcia neoregeliana* E. Lucas & C. E. Wilson], *Marlierea regeliana* O. Berg var. *parviflora* Kiaersk. [= *Myrcia neoriedeliana* E. Lucas & C. E. Wilson], *Marlierea schottiana* O. Berg [= *Myrcia neoglabra* E. Lucas & C. E. Wilson], *Marlierea scytophylla* Diels [= *Myrcia scytophylla* (Diels) E. Lucas & C. E. Wilson], *Marlierea suaveolens* Cambess. [= *Myrcia neosuaveolens* E. Lucas & C. E. Wilson], *Marlierea tomentosa* Cambess. [= *Myrcia neotomentosa* E. Lucas & C. E. Wilson], *Marlierea towarensis* O. Berg [= *Myrcia neotovarensis* E. Lucas & C. E. Wilson], *Marlierea verticillaris* O. Berg [= *Myrcia neoverticillaris* E. Lucas & C. E. Wilson], *Myrcia* sect. *Aulomyrcia* Nied., *Myrcia coelosepala* Kiaersk., *Myrcia colpodes* Kiaersk., *Myrcia decorticans* DC., *Myrcia imbricata* Gardner [= *Myrcia racemulosa* DC.], *Myrcia insularis* Gardner, *Myrcia limae* G. M. Barroso & Peixoto [= *Myrcia eumecephylla* (O. Berg) Nied.], *Myrcia littoralis* DC., *Myrcia myrtillifolia* DC., *Myrcia polyantha* DC., *Myrcia pubiflora* DC., *Myrcia pyramidata* O. Berg [= *Myrcia rubiginosa* Cambess.], *Myrcia racemulosa* DC., *Myrcia riodocensis* G. M. Barroso & Peixoto, *Myrcia rubella* Cambess. [= *Myrcia myrtillifolia* DC.], *Myrcia rubiginosa* Cambess., *Myrcia scutulifera* DC. [= *Myrcia racemulosa* DC.], *Myrcia strigipes* Mart. [= *Myrcia neotomentosa* E. Lucas & C. E. Wilson], *Myrciaria ehrenbergiana* O. Berg [= *Myrcia ehrenbergiana* (O. Berg) McVaugh], *Psidium guildingianum* Griseb. [= *Myrcia guildingiana* (Griseb.) E. Lucas & C. E. Wilson], *Rubachia neuwiediana* O. Berg [= *Myrcia neuwiediana* (O. Berg) E. Lucas & C. E. Wilson], and *Rubachia spathulata* O. Berg [= *Myrcia obversa* (D. Legrand) E. Lucas & C. E. Wilson]. A single neotype is designated for *Aulomyrcia ramuliflora* O. Berg [= *Myrcia ramuliflora* (O. Berg) N. Silveira]. Fifteen names are newly synonymized: *Aulomyrcia cambessediana* O. Berg [= *Myrcia coelosepala* Kiaersk.], *Aulomyrcia salzmännii* O. Berg [= *Myrcia decorticans* DC.], *Marlierea regeliana* O. Berg var. *parviflora* Kiaersk. [= *Myrcia neoriedeliana* E. Lucas & C. E. Wilson], *Myrcia amblyphylla* Kiaersk. [= *Myrcia coelosepala* Kiaersk.], *Myrcia dictyophylla* (O. Berg) Mattos & D. Legrand [= *Myrcia myrtillifolia* DC.], *Myrcia heringeriana* Mattos [= *Myrcia multiflora* DC.], *Myrcia limae* G. M. Barroso & Peixoto [= *Myrcia eumecephylla* (O. Berg) Nied.], *Myrcia lucida* McVaugh, *Myrcia lucida* var. *attenuata* McVaugh [= *Myrcia inaequiloba* (DC.) Lemée], *Myrcia lundiana* Kiaersk. [= *Myrcia amazonica* DC.], *Myrcia pallida* (O. Berg) N. Silveira [= *Myrcia multiflora* DC.], *Myrcia parnabibensis* (O. Berg) Kiaersk. [= *Myrcia myrtillifolia* DC.], *Myrcia rorida* (O. Berg) Kiaersk. [= *Myrcia myrtillifolia* DC.], *Myrcia rubella* Cambess. [= *Myrcia myrtillifolia* DC.], and *Myrcia taubatensis* Kiaersk. [= *Myrcia multiflora* DC.].

Key words: *Aulomyrcia*, *Calypttranthes*, Caribbean, Central America, IUCN Red List, *Krugia*, *Marlierea*, *Mozartia*, *Myrcia*, Myrtaceae, South America.

Myrcia DC. s.l. is a large (ca. 750 species; World Checklist of Selected Plant Families [WCSP], 2015), monophyletic group (Lucas et al., 2011) of Neotropical Myrtaceae previously known as subtribe Myrciineae (Berg, 1855–1856; McVaugh, 1968). The group comprises the traditionally accepted genera *Calypttranthes* Sw., *Gomidesia* O. Berg, *Marlierea* Cambess., and *Myrcia* that are paraphyletic or polyphyletic with respect to each other (Lucas et al., 2011; Wilson et al., 2016). *Myrcia* s.l. is an ecologically important genus in the Atlantic forests and cerrado savanna of eastern Brazil and is diverse in other tropical rainforest biomes such as the Amazon and Caribbean (Murray-Smith et al., 2009; Lucas et al., 2011). A monograph of the group is much needed and long overdue and will be supported by a new subgeneric classification (Lucas et al., in prep.). Justification for combining the traditional genera into a more inclusive *Myrcia* was given by Lucas and Sobral (2011); under such a scheme, *Myrcia* s.l. can be divided into morphologically cohesive groups based on the clades of Lucas et al. (2011). One such group corresponds to clade 9 of Lucas et al. (2011), and this

clade is here equated to *Myrcia* sect. *Aulomyrcia* (O. Berg) Griseb.

Most authors have recognized two groups within *Myrcia* s.l. (e.g., de Candolle, 1828; Berg, 1857–1859; Grisebach, 1864; Kiaerskou, 1893). Species with regular calyx lobes not prolonged beyond the ovary and flat hairy disks have been unequivocally referred to a group containing the type species of *Myrcia*, treated under that name at a variety of ranks. In this work we refer to that group as *Myrcia* sect. *Myrcia*. Species with a prolonged hypanthium and with a tendency for the otherwise free calyx lobes to tear at anthesis have been named by the same authors as *Aulomyrcia* O. Berg, also at a variety of ranks. *Aulomyrcia* was initially published as a genus by Otto Berg (1855–1856) and subsequently recognized as a section (Grisebach, 1864; Kiaerskou, 1893; McVaugh, 1968) or subgenus (Niedenzu, 1893; Legrand, 1961) of *Myrcia*. McVaugh (1969) later described a third section, *Myrcia* sect. *Armeriela* McVaugh, in which the calyx and hypanthium are more prolonged than in *Myrcia* sect. *Aulomyrcia*, with a tendency to disintegrate at anthesis. McVaugh

(1969) suggested *Myrcia* sect. *Aulomyrcia* was intermediate between *Myrcia* sections *Myrcia* and *Armeriela*. Infrageneric delimitation of *Myrcia* has always been difficult and unreliable; the taxonomic history of *Myrcia* sect. *Aulomyrcia* is discussed in detail by Lucas et al. (2011). Unpublished data based on whole genome sequencing produced by Lima et al. show clearly that a small number of species with two locules, currently considered synonyms (Sobral et al., 2015) of *M. guianensis* (Aubl.) DC. (not *Myrcia* sect. *Aulomyrcia*), emerge within the *Myrcia* sect. *Aulomyrcia* clade. The necessary transfers of synonymy are made here.

The recent compilation of collaborative checklists, such as the WCSP (2015) and the Lista de Espécies da Flora do Brasil (Sobral et al., 2015), has resulted in considerable taxonomic deflation and the welcomed consensus on the numbers of species in the traditional genera of *Myrcia* s.l. As delimited here, *Myrcia* sect. *Aulomyrcia* is a section of 124 species originally described in *Myrcia* and *Marlierea* and, in one case, *Calyptanthus*. Morphologically, the group is distinguished by a combination of characters such as persistent subfloral or vegetative bracts, an often asymmetrical inflorescence, a tendency toward whorled leaves and terminal inflorescences, (four to five free calyx lobes held erect and away from a uniformly bilocular ovary in flower and fruit, a shortly extended hypanthium that can tear on opening, and usually a slightly convex disk bearing a thin ring of stamens (see Lucas et al., 2011, for further discussion of morphology).

MATERIALS AND METHODS

Taxonomy used herein follows the WCSP (2015) modified where necessary according to the Lista de Espécies da Flora do Brasil (Sobral et al., 2015). Digital images are available at Global Plants (<www.plants.jstor.org>, 2015) or can be made available upon request. Information on the location/deposition of collections or the activities of collectors or authors has been taken from Stafleu and Cowan (1976–1988). Lectotypes are designated where necessary following the International Code of Nomenclature for Algae, Fungi, and Plants (McNeill et al., 2012). Because of difficulties in certainty that a specimen at the institution of an author was the only material examined at the time (McNeill, 2014), lectotypifications are made even when an apparent holotype appears obvious. Unless specified otherwise, selected lectotype material is that most likely used or seen by the protologue author, from the best distributed and representative collection available, usually the top set of the collector. Also unless specified otherwise,

where multiple syntypes are listed by the author, the lectotype gathering is that judged to best match the protologue description. Known isoelectotypes are listed. Remaining syntypes are not listed as they are readily available in protologues available to this study either via the project scratchpad (<http://myrcia.myspecies.info>), which contains images, protologues, and further information, or TROPICOS®. Collections of the following herbaria were visited: BM, BR, G, K, LE, M, NY, P, U, US, W; additional type images from C, F, MO, RB, and S were viewed online (separately from the JSTOR Global Plants website); online access to these collections was via Index Herbariorum (Thiers, 2015). A publication cutoff was necessary to complete this list; species published after 2011, when the main part of this work was carried out, are not treated.

Selected material cited was selected as follows: one specimen from each country and/or state/province except for widespread taxa where one to three species are recorded for each Taxonomic Databases Working Group (TDWG, 2001) level 4 region with emphasis on species records per vegetation type, to a maximum of 20 specimens, to broadly outline the distribution. All selected specimens were seen by one or more authors of this work and are referred to as “known to us.” Ever-expanding websites of specimen records and images, e.g., speciesLink and TROPICOS®, were consulted to ensure species distributions are as accurate as possible. In these cases, only specimens named by an authoritative specialist were used for distribution statements or calculations of extent of occurrence (EOO; IUCN, 2014); with a few noted exceptions, these have not been cited.

Preliminary conservation assessments were made using ArcGIS based on the range parameters of the IUCN (2014) and the protocol of Willis et al. (2003). Early in the assessment process, measurements of area of occurrence (AOO; IUCN, 2014) were discounted in favor of EOO as they consistently over-estimate the level of threat to species with anything other than restricted ranges. Assessments are based on material seen by us, unless specified otherwise where specimen data from the online collections cited above are also used. The category of threat as Vulnerable (VU D2) is used in cases where there is no evidence of a continuing decline or fluctuation in EOO or area or of the extent and/or quality of the habitat (IUCN, 2014) available to a species or whether the species exists in a protected or well-protected area. This lack of evidence is associated with species known from few close locations that have not been subject to recent floristic surveys. Criterion VU D2 allows for this information

gap, suggesting that a species' "small population size and/or restricted distribution make it more prone to the effects of human activities or stochastic events in an uncertain future, and is thus capable of becoming Critically Endangered or even Extinct in a very short time period" (IUCN, 2014: 59). Detailed information regarding environmental threat is from the Encyclopaedia of Earth (EOE, 2015) and the World Database on Protected Areas (WDPA, 2015); extra detail is provided for species associated with McVaugh's (1958) *Marlierea* sect. *Myrciopsis* McVaugh as these were the focus of a separate, unpublished study.

To maintain taxonomic meaning and reduce confusion, we have opted as much as possible to suffix the original epithet with "neo-" where new combinations are made unless this would result in both the epithet and the neo-epithet existing in the same section. All species are bilocular unless specified.

TAXONOMIC CONSPECTUS

Myrcia DC. in Bory de Saint-Vincent, Dict. Class. Hist. Nat. 11: 378. [Jan.] 1827. TYPE: *Myrcia bracteolaris* (Poir.) DC. [= *Myrtus bracteolaris* Poir.] (lectotype, designated by McVaugh [1956a: 143]).

Myrcia sect. **Aulomyrcia** (O. Berg) Griseb., Fl. Brit. W. Ind., 234. 1860. Basionym: *Aulomyrcia* O. Berg, Linnaea 27: 35. 1855. TYPE: *Myrcia multiflora* (Lam.) DC. [= *Eugenia multiflora* Lam.] (lectotype, designated by McVaugh [1956a: 137]).

Krugia Urb., Ber. Deutsch. Bot. Ges. 11: 375. 1893. TYPE: *Krugia elliptica* (Griseb.) Urb. [= *Marlierea elliptica* Griseb.].

Myrcia sect. *Aulomyrcia* Nied., Nat. Pflanzenfam. 3(7): 75–76. 1893, as "Sect. 1. Eu-Aulomyrcia." TYPE: *Myrcia pyrifolia* (Desv. ex Ham.) Nied. [= *Eugenia pyrifolia* Desv. ex Ham., Prodr. Pl. Ind. Occid., 44. 1825], (lectotype, designated here, P-00163115!).

Marlierea Cambess. in A. St.-Hil., Fl. Bras. Mer. 2(20): 373, tab. 156. [3 Aug.] 1833. TYPE: *Marlierea suaveolens* Cambess. (lectotype, designated by McVaugh [1956a: 142]).

Marlierea sect. *Myrciopsis* McVaugh, Mem. New York Bot. Gard. 10: 79. 1958, as *Marlierea* sect. *Myrcioides* McVaugh. [Orthographic error corrected by McVaugh, Fieldiana, Bot. 29(8): 470 1963] TYPE: *Marlierea bipennis* (O. Berg) McVaugh, Fieldiana, Bot. 29: 189. 1956. [= *Myrciaria bipennis* O. Berg, Linnaea 31: 259. 1862].

Myrcia sect. *Armeriela* McVaugh, Taxon 17: 378. 1968. TYPE: *Myrcia inaequiloba* (DC.) Lemée, Fl. Guyane Franç. 3: 150. 1954, non *Myrcia inaequiloba* (DC.) D. Legrand, Atas Simp. Biota Amazôn. 149. 1967 [1968], nom. illeg., isonym. [= *Eugenia inaequiloba* DC., Prodr. [de Candolle] 3: 282. 1828].

Rubachia O. Berg, Linnaea 27: 11. 1855, p.p. (The lectotype species, *Rubachia spiciflora* (Nees & Mart.) O. Berg, designated by McVaugh [1956a: 145] is a species of *Plinia* Plum. ex L. [Sobral, 1995]; the remaining *Rubachia* species are synonyms of *Myrcia* sect. *Aulomyrcia*).

Trees or shrubs; branching usually monopodial. Bracteoles often triangular and acute, usually persistent after fruit fall. Inflorescence of paniculate axes, axillary or emerging from single terminal whorls representing compression of all primary inflorescence nodes, primary axes symmetrical and cymose or asymmetrical and irregularly branched, often with a zigzagged appearance, occasionally reduced and spikelike. Perianth 4- or 5-merous; calyx lobes free to partially or completely fused, irregularly tearing open vertically through the calyx and hypanthial tissue, leaving calyx lobes of markedly different sizes or of regular triangles in a star shape, where tears are deep, staminal scars appear to be at the tips of the calyx lobes; floral disk glabrous; staminal ring thin, comprising less than 40% of total disk width; hypanthium extended in a flared tube beyond the ovary; ovary bilocular, 2 ovules per locule. Fruits globose.

Myrcia sect. *Aulomyrcia* is a distinct but variable, widespread, and speciose clade. Species diversity is highest in the Brazilian northern Atlantic forest and the Amazon, in particular on the Guiana shield. The majority of species in the clade possess inflorescences that are asymmetrical to some degree, often whorled, with persistent, pointed bracts and bilocular flowers with a tendency to tear open vertically, leaving four or five irregular calyx lobes. The clade includes the majority of species accepted in *Marlierea* at the time of writing (ca. 55%) and its traditional synonyms include *Rubachia*, p.p., all bilocular species previously assigned to *Aulomyrcia*, and the ca. 30 species of *Myrcia* sect. *Armeriela*.

Despite encompassing such morphological variety and so many species, coherent subgroups can be recognized in *Myrcia* sect. *Aulomyrcia* that may warrant future formal description. Results from molecular-based studies (e.g., Santos, 2014; Stagge-meier et al., 2015) have been used to supplement the morphological study presented here where five informal species groups are postulated. Ninety-five species are included within these groups, which represent ca. 77% of the 124 species formally considered herein. These may be of interest to those seeking a better understanding of the group for specimen identification and curation but are presented here only as a hypothesis for future testing. It has not been possible to suggest an affiliation for every

species, particularly where no or little material is available for study.

SPECIES GROUP A

This is a group of predominantly low-altitude, moist forest species with unusually long, whorled, wholly terminal inflorescences, coriaceous, often whorled leaves, and a raised or flat midvein; specific examples are *Myrcia insularis* Gardner and *M. clavija* Sobral. These species are most common in the Brazilian Atlantic forests north of Rio de Janeiro, but there are some species endemic to the Amazon forests such as *M. speciosa* (Amshoff) McVaugh.

Included species (15). *Myrcia areolata* (McVaugh) E. Lucas & C. E. Wilson, *M. badia* (O. Berg) N. Silveira, *M. clavija* Sobral, *M. colpodes* Kiaersk., *M. eumecephylla* (O. Berg) Nied., *M. gigantea* (O. Berg) Nied., *M. hexasticha* Kiaersk., *M. insularis* Gardner, *M. liesneri* B. Holst, *M. magna* D. Legrand, *M. neoestrellensis* E. Lucas & C. E. Wilson, *M. obversa* (D. Legrand) E. Lucas & C. E. Wilson, *M. speciosa* (Amshoff) McVaugh, *M. tetraphylla* Sobral, and *M. zetekiana* (Standl.) B. Holst.

SPECIES GROUP B

This group is based on *Marlierea* sect. *Myrciopsis* McVaugh who referred it to *Marlierea* rather than to *Myrcia* because of the nearly closed buds, presence of dibrachiate hairs, and the cymose tendency of the lateral inflorescence, often with flattened and/or winged rachises; McVaugh (1958) also noted that winged branchlets were characteristic of the group. We extend the group's circumscription to include all those species with cymose inflorescences and flattened rachises, regardless of the position of the inflorescence and also to those convincingly affiliated to those species in cited works. In this way, the group is superficially similar to species that emerge in clade 7 of Lucas et al. (2011); species of that group differ in having turbinate hypanthia with calyx lobes that do not tear below the staminal ring, vegetative growth that is often sympodial, and very precisely opposite branching within the cyme. Species of group B usually have an extended but flared hypanthium with calyx lobes that tear into the staminal ring, monopodial growth, and subopposite to alternate branching within the cyme.

Included species (31). *Myrcia bipennis* (O. Berg) McVaugh, *M. biptera* (Amshoff) E. Lucas & C. E. Wilson, *M. bolivarensis* (Steyerm.) McVaugh, *M. caesariata* (McVaugh) E. Lucas & C. E. Wilson, *M. calcicola* Proctor, *M. cana* (McVaugh) E. Lucas & C. E. Wilson, *M. caudata* (McVaugh) E. Lucas & C. E.

Wilson, *M. chonodisca* E. Lucas & C. E. Wilson, *M. compta* McVaugh, *M. convexivenia* (B. Holst) E. Lucas & C. E. Wilson, *M. ensiformis* (McVaugh) E. Lucas & C. E. Wilson, *M. ferruginea* (Poir.) DC., *M. gentryi* B. Holst, *M. guildingiana* (Griseb.) E. Lucas & C. E. Wilson, *M. induta* McVaugh, *M. karuaiensis* (Steyerm.) E. Lucas & C. E. Wilson, *M. kylistophylla* B. Holst, *M. lituatinervia* (O. Berg) E. Lucas & C. E. Wilson, *M. maguirei* (McVaugh) E. Lucas & C. E. Wilson, *M. mcvaughii* (B. Holst) E. Lucas & C. E. Wilson, *M. minutiflora* Sagot, *M. multiglomerata* (Amshoff) E. Lucas & C. E. Wilson, *M. neoschomburgkiana* E. Lucas & C. E. Wilson, *M. neotovarensis* E. Lucas & C. E. Wilson, *M. portoricensis* (Britton) Cedeño-Mald. & Breckon ex F. S. Axelrod, *M. pudica* (McVaugh) E. Lucas & C. E. Wilson, *M. rotundata* (Amshoff) McVaugh, *M. sessiliflora* McVaugh, *M. skeldingii* Proctor, *M. suborbicularis* (McVaugh) E. Lucas & C. E. Wilson, and *M. ventuarensis* (B. Holst) E. Lucas & C. E. Wilson.

SPECIES GROUP C

This includes the decorticans complex (Holst, 2002; Holst & Kawasaki, 2004) distinguished by reddish brown hairs turning gray with age, petioles often corky or flaky, four or five internally pubescent and unequally tearing calyx lobes, persistent inflorescence bracts, and cotyledons somewhat fused or indistinct. Specific examples are *Myrcia inaequiloba*, *M. saxatilis* (Amshoff) McVaugh, and *M. umbraticola* (Kunth) E. Lucas & C. E. Wilson. This group also contains *M. aulomyrcioides* E. Lucas & C. E. Wilson, a new name ($\equiv$ *Calyptranthes multiflora* Poepp. ex O. Berg), the single species of *Calyptranthes* that so far emerges with species of *Myrcia* sect. *Aulomyrcia* in molecular analysis (Wilson et al., 2016); there is also clear support (Staggemeier et al., 2015) that *M. multiflora* and *M. racemosa* (O. Berg) Kiaersk. are associated with this group as well as species (Lima et al., in prep.) formerly included as synonyms of *M. guianensis* (not *Myrcia* sect. *Aulomyrcia*) such as *M. littoralis* DC. and *M. myrtillifolia* DC.

Included species (33). *Myrcia albidotomentosa* (Amshoff) McVaugh, *M. antillana* McVaugh, *M. aulomyrcioides* E. Lucas & C. E. Wilson, *M. blanchetiana* (O. Berg) Mattos, *M. coelosepala* Kiaersk., *M. decorticans* DC., *M. diaphana* (O. Berg) N. Silveira, *M. dichrophylla* D. Legrand, *M. egensis* (O. Berg) McVaugh, *M. exploratoris* McVaugh, *M. fusca* B. Holst & M. L. Kavas., *M. grandis* McVaugh, *M. inaequiloba* (DC.) D. Legrand, *M. littoralis* DC., *M. matthewsiana* (O. Berg) McVaugh, *M. micropetala* (Mart.) Nied., *M. morroqueimadensis* Kiaersk., *M.*

multiflora (Lam.) DC., *M. myrtillifolia* DC., *M. neocuprea* E. Lucas & C. E. Wilson, *M. platyclada* DC., *M. polyantha* DC., *M. porphyrea* McVaugh, *M. pubiflora* DC., *M. quitarensis* (Benth.) Sagot, *M. racemosa* (O. Berg) Kiaersk, *M. racemulosa* DC., *M. ramuliflora* (O. Berg) N. Silveira, *M. rufipila* McVaugh, *M. rupta* M. L. Kawas. & B. Holst, *M. saxatilis* (Amshoff) McVaugh, *M. scytophylla* (Diels) E. Lucas & C. E. Wilson, *M. subobliqua* (O. Berg) Nied., and *M. umbraticola* (Kunth) E. Lucas & C. E. Wilson.

SPECIES GROUP D

A fourth group of species is associated with the widespread species *Myrcia amazonica* DC. In their reddish or sordid indumenta and impressed midveins these species resemble those of the decorticans complex (Holst, 2002; Holst & Kawasaki, 2004). The arrangement distinguishing these two groups was followed in light of authors (such as McVaugh, 1969; Kawasaki & Holst, 1994; Holst & Kawasaki, 2004) who cite the presence of five internally glabrous calyx lobes that are “usually about the same size” (McVaugh, 1969: 110) as indicative of an indepen-

dent origin for these species. The petioles of *M. amazonica* and related species are never corky.
Included species (6). *Myrcia amazonica* DC., *M. pyrifolia* (Desv. ex Ham.) Nied., *M. riococensis* G. M. Barroso & Peixoto, *M. rubiginosa* Cambess., *M. salticola* (Steyerm.) McVaugh, and *M. santateresana* Sobral.

SPECIES GROUP E

This includes species with partially or wholly fused buds that tear deeply through the hypanthium and disk at anthesis into regular star-shaped flowers, often with staminal scars remaining only on the tips of the remaining calyx lobes.
Included species (10). *Myrcia neodimorpha* E. Lucas & C. E. Wilson, *M. neoglabra* E. Lucas & C. E. Wilson, *M. neoobscura* E. Lucas & C. E. Wilson, *M. neoregeliana* E. Lucas & C. E. Wilson, *M. neoriedeliana* E. Lucas & C. E. Wilson, *M. neo-suaveolens* E. Lucas & C. E. Wilson, *M. neotomentosa* E. Lucas & C. E. Wilson, *M. newwiedeana* (O. Berg) E. Lucas & C. E. Wilson, *M. rugosior* (McVaugh) E. Lucas & C. E. Wilson, and *M. sucrei* (G. M. Barroso & Peixoto) E. Lucas & C. E. Wilson.

KEY TO INFORMAL SPECIES GROUPS IN MYRCIA SECT. AULOMYRCIA

This key may be used to roughly sort specimens or to help narrow down an identification. It is emphasized, however, that the key is intended primarily to present useful diagnostic suites of characters while the evolutionary relationships and groupings of species remain untested and informal concepts.

- 1. Inflorescence of long, terminal, asymmetrical panicles, often whorled or in decussate pairs subtended by prominent decussate bracts; midvein flat or raised species group A
- 1'. Inflorescence otherwise not whorled or decussate; midvein usually flat or impressed; bracts below inflorescence not prominent 2
- 2. Inflorescence of lateral or terminal, cymose panicles, often in clusters, rachises often flattened and/or winged species group B
- 2'. Inflorescence of terminal and subterminal, asymmetrical panicles, rachises rarely flattened 3
- 3. On anthesis, calyx tearing through hypanthium and disk, leaving a 5-parted, star-shaped structure .. species group E
- 3'. On anthesis, calyx tearing to hypanthium rim only, leaving 4 to 5 regular or irregular calyx lobes 4
- 4. Four to five internally pubescent calyx lobes, sometimes of irregular sizes; petioles often corky ... species group C
- 4'. Five internally glabrous or at most strigose calyx lobes of roughly equal size; petioles never corky .. species group D

1. *Myrcia abbotiana* (Urb.) Alain, Mem. New York Bot. Gard. 21(2): 138. 1971. Basionym: *Eugenia abbotiana* Urb., Repert. Spec. Nov. Regni Veg. 20: 341. 1924. *Mozartia abbottiana* (Urb.) Urb., Ark. Bot. 22: 24. 1929. TYPE: [Dominican Republic] Santo Domingo. “adolum austalem sinus samanensis prope sinum San Lorenzo,” Apr., sine anno, *W. L. Abbot* 2243 (holotype, US not seen). [No species group assignment].

Habitat and distribution. *Myrcia abbotiana* is endemic to the Dominican Republic on serpentine soils between altitudes of 10 and 400 m.

IUCN Red List category. *Myrcia abbotiana* has an EOO of ca. 500 km² and occurs in two main areas over three districts. One population exists near the capital city Santo Domingo with no environmental protection in an area surrounded by agricultural expansion; the other exists on and around the Samaná Peninsula, at least some of which is protected in the Parque Nacional Los Haitises. The species is well represented in local (JSBD) and international herbaria, suggesting reasonable population size and occupation of more than five distinct localities. We, therefore, list this species as Least Concern (LC) according to IUCN criteria (2014).

Notes. *Myrcia abbotiana* was placed by Urban into a segregate genus, *Mozartia* Urb., on the basis of the character of a single locule within the ovary. The study of Santos (2014) demonstrates this species to emerge within *Myrcia* sect. *Aulomyrcia*.

Selected specimens. DOMINICAN REPUBLIC. **Distrito Nacional:** vacacional Matua, on the curve of the river Matua next to the “balneario,” *Lucas 1108* (K). **Hato Mayor:** Sabana de La Mar Parque Nacional Los Haitises, Bahia San Lorenzo, despues de la Cueva de Linea, yendo hacia Los Naranjos, *Clase 7311* (K). **Samaná:** Península de Samaná Laguna, slope of Pan de Azucar, *Ekman 15178* (K).

2. *Myrcia albidotomentosa* (Amshoff) McVaugh, Mem. New York Bot. Gard. 18: 79. 1969. Basionym: *Aulomyrcia albidotomentosa* Amshoff, Bull. Torrey Bot. Club 75: 532. 1948. TYPE: British Guiana. Kaieteur savanna, 6 Sep. 1937, *C. I. Sandwith 1392* (holotype, K-000342548!; isotypes, NY!, U-0102924!, US!). [Species group C].

Habitat and distribution. *Myrcia albidotomentosa* is found from northern South America to northern Brazil, reported from an altitude of 360 m.

IUCN Red List category. *Myrcia albidotomentosa* has an EOO of ca. 320,000 km² and has been collected in multiple ecoregions (WWF, 2014), several of which are under relatively low levels of threat (EOE, 2015). This species is of Least Concern (LC) according to IUCN criteria (2014).

Notes. *Myrcia albidotomentosa* has a somewhat thickened staminal ring bearing white hairs. Its placement in *Myrcia* sect. *Aulomyrcia* is evident from the tetramerous flowers, corky petioles, and the asymmetric inflorescence architecture with filiform bracts subtending each flower. The species has white silky hairs covering the hypanthium and calyx lobes that are lightly hairy internally; the slightly thickened discolorous leaves with impressed venation are reminiscent of *M. inaequiloba*. Holst (2002) provided further description and discussion and noted similarity in the coriaceous, dry, reddish brown leaves and short, corky-rimose petioles with species of the decorticans complex; additional specimens are also cited in that work.

Selected specimens. BRAZIL. **Amazonas:** encosta da serra Aracá, *N. A. Rosa 2371* (NY). GUYANA. **Potaro-Siparuni:** Mure-mure creek to ca. 3 mi. above mouth, beyond Mure-mure savanna, *Cowan 2200* (K). SURINAME. **Sipaliwini:** Tafelberg Mtn., *Maguire 24734* (K). VENEZUELA. **Amazonas:** Atures, Río Coro-Coro, W of Serranía de Yutaje, *Holst 3102* (K). **Bolívar:** Heres, Cerro Marutani,

cumbre, afloramiento de piedra arenisca en la altiplanicie a lo largo del río Carla, afluente de las cabeceras del río Paragúa, *Steiermark 124087* (NY).

3. *Myrcia amapensis* McVaugh, Mem. New York Bot. Gard. 18: 80. 1969. TYPE: Brazil. Amapá: coastal region, Km. 134, Agua Azul, rd. to Amapá, 23 July 1962, *J. M. Pires 52247* (holotype, MICH-1109489!; isotypes, NY-00405379!, US-00117733!, VEN-76830!). [No species group assignment].

Habitat and distribution. *Myrcia amapensis* is found in coastal and riverine regions of northern Brazil, including Amapá, Para, and Amazonas at an altitude not exceeding ca. 5 m.

IUCN Red List category. Authoritatively named specimens of *Myrcia amapensis*, available online (speciesLink, 2015; TROPICOS®, 2015), report that this species has also been collected in the Ducke Reserve near Manaus, Brazil. This gives the species an EOO of ca. 40,000 km², disqualifying it from a category of threat (IUCN, 2014). However, the species is known from less than five collections, and more information regarding its abundance is required before a category of threat can be assigned. It is assessed as Data Deficient (DD) according to IUCN criteria (2014).

Notes. Only the type and one other collection of *Myrcia amapensis* have been seen for this study. This species strongly resembles *M. multiflora* in both leaf and floral morphology. In *M. amapensis*, the dried leaves are browner than would be expected in *M. multiflora*, and there is a tendency for subsessile leaves.

Selected specimen. BRAZIL. **Pará:** Almeirim, Mt. Dourado, área da agua azul, prox. gleba angelim da reserva genética, *Pires 1382* (NY).

4. *Myrcia amazonica* DC., Prodr. [de Candolle] 3: 250. 1828. *Aulomyrcia amazonica* (DC.) O. Berg, Linnaea 27: 41. 1855. TYPE: Brazil. Amazonas: Solimões, s.d., *C. F. P. Martius s.n.* (lectotype, designated by McVaugh [1969: 110], M-0136802!; isolectotypes, G-DC!, M-0136800!). [Species group D].

Myrcia lundiana Kiaersk., Enum. Myrt. Bras., 78. 1893, replacement name. Replaced name: *Aulomyrcia vautheriana* O. Berg in Linnaea 30: 655. 1861, syn. nov. TYPE: [Brazil.] Brasilia, s.d., *herb. Richard s.n.* (holotype, P-00161048!).

Habitat and distribution. *Myrcia amazonica* is widespread throughout tropical America from moist forests at altitudes from ca. 50 to 1000 m.

IUCN Red List category. The EOO of *Myrcia amazonica* exceeds 5 million km² and is a very commonly collected species from forest habitats. *Myrcia amazonica* is assessed as Least Concern (LC) according to IUCN criteria (2014).

Notes. *Myrcia amazonica* has relatively small (no more than ca. 2 mm) flowers for *Myrcia* sect. *Aulomyrcia*, five regularly sized and internally glabrous (or at most strigose) calyx lobes, and flat to impressed midveins. *Myrcia lundiana* is cited by Sobral et al. (2015) as occurring in Espírito Santo and Rio de Janeiro. The type collection is recognizable as *M. amazonica*, in particular sharing the large inflorescence with very small flowers, leaf shape, and venation.

Selected specimens. BELIZE. Toledo Distr., near San Antonio, *Gentle* 7512 (K). BOLIVIA. **Santa Cruz:** Velasco, Parque Nac. Noel Kempff M. Camp. Huanchaca, *Killeen* 7500 (K). BRAZIL. **Acre:** Rio Yaco, near mouth of Rio Macauhan (tributary of Rio Yaco), *Krukoff* 5705 (K). **Amapá:** Rio Falsino, ca. 10 km upstream of confluence with Rio Araguari, W bank, *Rabelo* 2377 (K). **Amazonas:** Ponta Negra, banks of Rio Negro, *Prance* 4841 (K); ca. 90 km N of Manaus, Distr. Agropec. Suframa, rod. BR 174, Km. 72, faz. Dimona, *Nee* 42957 (K). **Bahia:** Estr. entre Sururu e Vila Brazil, a 6–14 km de Sururu, a 12 km de Buerarema, *Mori* 12877 (K); 6 km N of Barra da Estiva, not far from Rio Preto, *Harley* 15646 (K); arredores de Catolés, *Harley* 50330 (K); Abaíra, Agua Limpa, *Ganev* 2585 (K). **Distrito Federal:** Brasília, Rod. Belém–Brasília, *Kuhlmann* 287 (K). **Espírito Santo:** Linhares, Res. Nat. Vale, *Folli* 6250 (K). **Goiás:** Araguaína, Belém–Brasília, *Prance* 58988 (K). **Mato Grosso:** Barra do Garças, Xavantina Rd., 77 km from Barra do Garças, *Hunt* 6007 (K); margin of Garapu airstrip, *Prance* 59190 (K). **Minas Gerais:** Distr. Santana do Rio Petro (Cabeça de Boi), APA do Parque Nac. Serra do Cipó, *Santos* 353 (K). **Pará:** Oriximiná, Cachoeira Porteira, porto do Índio, *Ferreira* 9627 (K). **Rio de Janeiro:** Macaé, Estr. para Carepebus, Faz. Jurubatiba, *de Lima* 2898 (K). **Rondônia:** Costa Marques, Chapada dos Parecis, Distr. Alta Floresta, estr. P-56, Km. 17, *Cid* 4539 (K). **Roraima:** Boa Vista, Serra de Tepequém, *Silva* 394 (K). **Santa Catarina:** Horto florestal, I.N.P., *Reitz* 3116 (K). COSTA RICA. **Puntarenas:** Parque Nac. Corcovado Sirena, bank of Rio Claro, *Delprete* 5171 (K). DOMINICA. Syndicate Estate, *Pendry* 307 (K). DOMINICAN REPUBLIC. Cordillera Central, *Ekman* 6355 (K). FRENCH GUIANA. Pic Matecho versant sud, *Granville* 14303 (K). GUYANA. **East Berbice-Corentyne:** Arabupu, s. coll. 48 (K); Demerara-Mahaica, along Linden–Soesdyke Hwy., 16 mi. S of Georgetown, W of Swan Settlement, *Pipoly* 9148 (K). HAITI. Massif de la Hotte, western group, Tiburon, Morne Citadelle, *Ekman* 10543 (IJ). PUERTO RICO. Caribbean Nat. Forest, along Quebrada Sonadora, downstream from rte. 186 to jct. Rio Espírito Santo, *Axelrod* 4402 (K). ST. VINCENT. s. loc., *Resil* 181 (K). SURINAME. **Brokopondo:** Van Bloommesteijn Lake, Tonka Island, emplacement, near guesthouse, *Bhikhi* 681 (K). TRINIDAD AND TOBAGO. St. Andrew, Arena

Reserve, *Broadway* s.n. (K). VENEZUELA. **Bolívar:** 1–4 km N of El Pauji on trail to Uaipaur, *Liesner* 19488 (K).

5. *Myrcia antillana* McVaugh, J. Arnold Arbor. 54: 311. 1973. TYPE: Lesser Antilles. St. Lucia: Savanne Edmund Distr., SE of Piton Troumassée, 11–12 May 1958, *G. R. Proctor* 17973 (holotype, MICH-1109487!; isotypes, A-00071062!, IJ!, US-00117734!). [Species group C].

Habitat and distribution. *Myrcia antillana* has been collected from the Lesser Antilles, from altitudes of 150–850 m.

IUCN Red List category. *Myrcia antillana* is known to us from three collections, well spread amongst the islands of the Lesser Antilles. Herbarium collections from the region are not readily available online or otherwise, making it hard to estimate the frequency of this species in this region; however, it is represented by six separate gatherings at the Institute of Jamaica. *Myrcia antillana* appears restricted to the Lesser Antilles, with an EOO of > 1000 km² and a correspondingly small AOO due to its restriction to the islands. The islands themselves suffer from land alteration associated with mining, agriculture, population increase, and tourism. *Myrcia antillana* is assessed here as Endangered (EN) according to IUCN criteria (2014).

Notes. *Myrcia antillana* resembles *M. decorticans* in having an impressed midvein, a terminal inflorescence covered in rusty hairs comprising two long, sturdy panicles, corky petioles, and free calyx lobes that tear on opening. The former species is larger and thicker in every respect. The leaves of *M. antillana* have a mottled, shiny appearance.

Selected specimens. DOMINICA. **Saint Joseph:** Layou, Layou Forest, Belle Montagne, *Ramage* s.n. (K). GUADELOUPE. s. loc., *Barrier* 2400 (NY). ST. LUCIA. **Savanne Edmund:** SE of Piton Troumassée, *Proctor* 17733 (IJ). ST. VINCENT. Mt. Grande Bonhomme, *Proctor* 26063 (IJ).

6. *Myrcia argentigemma* E. Lucas & C. E. Wilson, nom. nov. Replaced name: *Marlierea spruceana* O. Berg in C. F. P. von Martius & auct. suc. (eds.), Fl. Bras. 14: 34. 1857, non *Myrcia spruceana* O. Berg in C. F. P. von Martius & auct. suc. (eds.), Fl. Bras. 14(1): 165. 1857. TYPE: [Brazil. Amazonas:] Rio Negro, inter Barra et Barcellos, s.d., *R. Spruce* 1905 (holotype, M-0171095!; isotypes, GOET-008240!, K-000330459!, K-000330460!,

MICH-1109462!). [No species group assignment].

Habitat and distribution. *Myrcia argentigemma* is found in dense Amazonian forest, on sandy soils, riverbanks, and igapó forest in Venezuela, Colombia, Peru, and Brazil at altitudes of ca. 100–200 m.

IUCN Red List category. *Myrcia argentigemma* is a well-collected, widespread species known to us from more than 15 independent localities and is well represented in online herbaria (EOO > 300,000 km²). *Myrcia argentigemma* is assessed as Least Concern (LC) according to IUCN criteria (2014).

Notes. *Myrcia argentigemma* is a species that is distinguished by an impressed midvein on the adaxial blade surface; monopodial branching; a terminal, cymose inflorescence; and turbinate, closed buds that are covered with silver-colored appressed hairs.

Selected specimens. BOLIVIA. Pando, Rio Abuna, *Prance* 8512 (K). BRAZIL. **Acre:** Serra da Moa, *Prance* 12264 (K). **Amazonas:** Manaus, Cachoeira alta Tarumã, *Prance* 2686 (K). **Mato Grosso:** Rio Aripuanã, rd. from Núcleo Pioneiro de Humboldt to New Airport, *Berg* 19857 (K). **Rondônia:** Espigão de Oeste, Rod. Cuiabá–Porto Velho, *Cid* 4670 (K). COLOMBIA. **Vaupés:** Mitu & vic., *Zarucchi* 1831 (K).

7. *Myrcia areolata* (McVaugh) E. Lucas & C. E. Wilson, comb. nov. *Marlierea areolata* McVaugh, Fieldiana, Bot. 29: 175. 1956. TYPE: Peru. Loreto: Middle Ucalayli, 1923, *G. Tessmann* 3264 (holotype, G-00223340!; isotypes, F-0040039F!, NY-00038434!, S-052556!, US-00153783!). [Species group A].

Habitat and distribution. *Myrcia areolata* is found in the forests of northern Peru at altitudes of ca. 100–220 m.

IUCN Red List category. *Myrcia areolata* has been assessed by Bocángel et al. (2006) to be Endangered (EN) according to IUCN criteria (2014).

Notes. *Myrcia areolata* resembles *M. amazonica* but has a raised midvein. McVaugh (1969) also mentions the terminal inflorescence of this species. *Myrcia areolata* has terminal, whorled inflorescences; flowers with four, fairly regular, internally glabrous calyx lobes; and decorticating bark on the rachises. No specimens of this species could be located in visited herbaria or online; this suggests a rare species or extremely narrow distribution.

8. *Myrcia aulomyrcioides* E. Lucas & C. E. Wilson, nom. nov. Replaced name: *Calyptranthes multiflora* Poepp. ex O. Berg in C. F. P. von Martius & auct. suc. (eds.), Fl. Bras. 14: 42. 1857, non *Myrcia multiflora* (Lam.) DC., Prodr. [de Candolle] 3: 244. 1828. *Chytraculia multiflora* (Poepp. ex O. Berg) Kuntze, Revis. Gen. Pl. 1: 238. 1891. TYPE: [Brazil.] Amazonas: Solimões, flumen Tefte, 1834, *E. F. Poeppig* 2684 (lectotype, designated by Araújo & Lucas [2013: 386], W-0028208!; isotypes, F-0064856F!, F-0064857F!, G-00227471!, G-00227472!, HAL-0089621!, M not seen, MICH-1109778!, NY-00386766!, P-00723209!, W-0031794!). [Species group C].

Habitat and distribution. *Myrcia aulomyrcioides* is found in mixed flat lowland to montane forest on riverbanks, sand, and clay. It is widespread in Amazonian biomes from Venezuela to Bolivia and Brazil at altitudes of ca. 0–800 m.

IUCN Red List category. *Myrcia aulomyrcioides* is recorded from multiple localities (speciesLink, 2015), has an EOO of ca. 340,000 km², and occurs in several ecoregions (WWF, 2015), some under relatively low levels of threat (EOE, 2015). *Myrcia aulomyrcioides* is assessed as Least Concern (LC) according to IUCN criteria (2014).

Notes. Wilson et al. (2016) reported *Myrcia aulomyrcioides*, previously recognized as *Calyptranthes*, to emerge in a molecular-based phylogeny with other species of *Myrcia* sect. *Aulomyrcia*. Morphologically, the species resembles *M. caesariata* and *M. biptera* in its possession of mixed terminal and lateral bunches of glabrous, cymose panicles with flattened rachises. Holst (2002) provided more description, discussion, and specimen citations; he also observes that buds in collections from the Lesser Antilles open by longitudinal tearing. In the same work, Holst suggested that *C. forsteri* O. Berg could just as well be placed in *Marlierea*; further work is required to assess relationships between these species.

Selected specimens. BOLIVIA. **Pando:** 74 km SW Cobija, Puerto Oro, *Pennington* 153 (K). BRAZIL. **Amazonas:** Vila Bittencourt, *do Amarel* 575 (K). **Rondônia:** Rio Pacaás Novos, 8–25 km, above mouth, *Prance* 6827 (K). **Roraima:** Rorainópolis, Res. Pop. Xixuaú–Xiparina, *Araújo* 1884 (K). COLOMBIA. **Vichada:** Parque Nac. El Tuparro, along Cano Peinilla, *Zarucchi* 3631 (K). PERU. **Loreto:** Maynas, Pebas, Quebrada “tuny,” margen derecha del Rio Ampiyacu, *Revilla* 564 (G). VENEZUELA. **Amazonas:** San Carlos de Rio Negro, entre San Carlos de Rio Negro y la boca del Rio Casiquare, *Stergios* 13092 (US).

9. *Myrcia badia* (O. Berg) N. Silveira, Roessleria 7: 66. 1985. *Aulomyrcia badia* O. Berg in C. F. P. von Martius & auct. suc. (eds.), Fl. Bras. 14: 547. 1859. TYPE: [Brazil.] Brasilia, s.d., *L. Riedel s.n.* (holotype, LE-00007023!). [Species group A].

Habitat and distribution. Insufficient material is available to provide a meaningful distribution for *Myrcia badia*.

IUCN Red List category. *Myrcia badia* is known only from the type from an unspecified locality in Brazil. As such, the species is assessed as Data Deficient (DD) according to IUCN criteria (2014).

Notes. The type specimen of *Myrcia badia* has a flat to channeled midvein and a terminal to subterminal pair of long, glabrous panicles and deciduous bracts. Bracts that are large (to 2.5 cm), foliose, and lightly pubescent subtend the secondary branches of the inflorescence. The combined characters of thick, long leaves drying brown and the terminal, whorled inflorescence with bracts suggest an affinity with species from the littoral coasts of Brazil (and a few from the Amazon basin/Amazonia), only a few of which (e.g., *Myrcia subulata* (McVaugh) E. Lucas & C. E. Wilson) do not have a raised midvein.

10. *Myrcia bipennis* (O. Berg) McVaugh, Fieldiana, Bot. 29: 189. 1956. Basionym: *Myrciaria bipennis* O. Berg, Linnaea 31: 259. 1862. *Marlierea bipennis* (O. Berg) McVaugh, Mem. New York Bot. Gard. 10: 79. 1958. TYPE: Brazil. Rio Negro, Dec. 1854, *R. Spruce* 3770 (holotype, BR-0000008259134!; isotypes, BM-000953636!, F-0093423F!, G-00227912!, K-000330540!, K-000330541!, K-000330542!, MICH-1109536!, NY-00405289!, P-00217954!, P-00217953!). [Species group B].

Habitat and distribution. *Myrcia bipennis* is found in the forests of Northern Brazil (Amazonas and Acre), Guyana, and Venezuela (Amazonas), from an altitude of ca. 100 m.

IUCN Red List category. *Myrcia bipennis* is known from nine collections from seven localities, with an EOO > 600,000 km². The species is recorded from largely intact areas in which human encroachment has just begun (Iquitos varzeá; WWF, 2015). However, the region is threatened by logging, gold mining, deforestation for agricultural expansion, and oil extraction (EOE, 2015). Should habitat

removal persist, the conservation status would need to be reviewed. At present, the species is assessed as Least Concern (LC) according to IUCN (2014) criteria.

Notes. *Myrcia bipennis* is the type species of McVaugh's (1958) *Marlierea* sect. *Myrciopsis*; there is a clear resemblance to other species in this group such as *Myrcia neoschomburgkiana* and *M. biptera*. *Myrcia bipennis* is entirely glabrous with subsessile, or very shortly petiolate, leaves with a convex midvein; internodes are lightly or very distinctly winged. The inflorescence is in bunched, lateral panicles with flattened rachises; fruits are globose with persistent, short, irregular calyx lobes.

Selected specimens. BRAZIL. **Acre:** Porto Valter, *Maas* 13194 (NY). **Amazonas:** cachoeira Caranguejo, Rio Cauabury, *Holt* 551 (NY). GUYANA. **Barima-Waini:** Arukamai River, Aruka River, *Forest Department of British Guiana* 924 (K).

11. *Myrcia biptera* (Amshoff) E. Lucas & C. E. Wilson, comb. nov. Basionym: *Marlierea biptera* Amshoff, Recueil Trav. Bot. Néerl. 42: 3. 1950. TYPE: Suriname. Gonini River, 20 Feb. 1918, *B. W. [J. W. Goggrijp]* 3719 (holotype, U-0049625!; isotype, NY-00405288!). [Species group B].

Habitat and distribution. *Myrcia biptera* has been collected from riverine sites in Surinam; the altitude of these collections is not precisely known.

IUCN Red List category. *Myrcia biptera* is known only from the type collection and from a relatively poorly known and collected area. An EOO cannot be calculated, and we consider the species to be rare. The single known collection is from the Guianan moist forests, where environmental threat is low, protected areas are few, and conservation strategies are required (WWF, 2015). This species was last collected in 1950. The area in which the specimens were collected still appears to be intact (Google Inc., 2015) but is not protected. The rarity of the species and this lack of protection make it vulnerable to stochastic change. *Myrcia biptera* is assessed as Vulnerable (VU D2) according to IUCN criteria (2014).

Notes. *Myrcia biptera* is a species distinguished by branchlet internodes bearing wings alternating in orientation, long-acuminate leaves (to 25 cm) with convex midveins, and mixed terminal and lateral bunches of glabrous, cymose panicles with flattened

rachises; the calyx tears very irregularly at anthesis, often leaving a single, much larger calyx lobe.

12. *Myrcia blanchetiana* (O. Berg) Mattos, Arq. Bot. Estado São Paulo 4: 59. 1966. Basionym: *Aulomyrcia blanchetiana* O. Berg in C. F. P. von Martius & auct. suc. (eds.), Fl. Bras. 14: 65. 1857. TYPE: [Brazil.] Bahia, *J. S. Blanchet 3391* (holotype, B†; lectotype, designated here, P-00161509!; isoelectotypes, BM-000953637!, BR-0000005238330!, C-10015829!, F-0064685F!, F-0064686F!, G-00222508!, HAL-0089798!, K-000343975!, MICH-1109842!, NY-00386648!, NY-00386649!, NY-00386650!, P-00161510!, P-00751186). [Species group C].

Habitat and distribution. *Myrcia blanchetiana* has been collected in Bahia from campo rupestre, caatinga, and sandy soils from altitudes of 500–1800 m.

IUCN Red List category. *Myrcia blanchetiana* is a commonly collected species with an EOO > 90,000 km². *Myrcia blanchetiana* is assessed as Least Concern (LC) according to IUCN criteria (2014).

Notes. *Myrcia blanchetiana* is a distinctive species without bracts and with a short inflorescence no more than ca. 5.5 mm; fruits are uniform small balls with regular, persistent calyx lobes. Unconfirmed identifications (speciesLink, 2015) suggest this species may occur in Minas Gerais and Pernambuco in Brazil.

Selected specimen. BRAZIL. **Bahia:** Mucugê, Pico do Gobria, *Castro 107620* (K).

13. *Myrcia bolivarensis* (Steerm.) McVaugh, Mem. New York Bot. Gard. 18: 81. 1969. Basionym: *Aulomyrcia bolivarensis* Steerm., Fieldiana, Bot. 28: 1004. 1957. TYPE: [Venezuela.] Bolívar: Patari-tepui, 30 Oct. 1944, *J. A. Steyermark 59534* (holotype, F-0064687F!; isotypes, F-0064687F!, NY-00386644!, U-0005098!, US-00048595!, VEN-37418!). [Species group B].

Habitat and distribution. *Myrcia bolivarensis* is a montane species found on slopes overlying sandstone from Venezuela to Guyana and from altitudes of ca. 1800–2100 m.

IUCN Red List category. *Myrcia bolivarensis* is known from 18 collections from 16 sites; it is well protected, with 14 out of 18 collections made in

protected areas (WDPA, 2015). The last known collection was made in 2008 (*Meier 14839*, K!). *Myrcia bolivarensis* is assessed as Least Concern (LC) according to IUCN criteria (2014).

Notes. The protologue of *Myrcia bolivarensis* compares the species to *M. neoschomburgkiana*, and McVaugh (1969) noted a resemblance to *M. minutiflora*. *Myrcia bolivarensis* has strongly acuminate leaves and bunches of reduced lateral inflorescences with silky pubescence, resembling these species and also *M. caudata*. Therefore, the species may be compared to those of McVaugh's (1958) *Marlierea* sect. *Myrciopsis*. Fruits strongly resemble the smooth dark balls of *M. caudata* but with unusually tiny remnants of the hypanthium/calyx lobes. A further difference from *M. caudata* can be seen in the midvein, convex in *M. bolivarensis* (vs. clearly raised in *M. caudata*).

Selected specimens. GUYANA. **Cuyuni-Mazaruni:** 2–5 km NW of N prov. of Roraima, *Hahn 5473* (NY). **Potaro-Siparuni:** Mt. Ayanganna, E face, plateau above 2nd of 4 escarpments, *Clarke 9289* (K). VENEZUELA. **Amazonas:** Atures, Cumbre del Cerro Yavi, Rio Parucito, *Huber 11851* (K). **Bolívar:** St. Teresita de Kavanayén, *Steyermark 60435* (NY, U).

14. *Myrcia caesariata* (McVaugh) E. Lucas & C. E. Wilson, comb. nov. Basionym: *Marlierea caesariata* McVaugh, Mem. New York Bot. Gard. 10: 81. 1958. TYPE: Venezuela. Amazonas: Cerro de la Neblina, Rio Yatua. 23 Dec. 1953, *B. Maguire 36820* (holotype, MICH-1109606!; isotypes, K-00036836!, NY-00563996!, US-00036836!, VEN-41584!). [Species group B].

Habitat and distribution. *Myrcia caesariata* was collected on the Cerro de la Neblina, Amazonas Province, Venezuela, at altitudes of ca. 650–700 m.

IUCN Red List category. *Myrcia caesariata* is known only from the type specimen collected in 1953, from what is now the relatively inaccessible Médio Rio Negro II Indigenous Reserve (WDPA, 2015). Until more fieldwork in and around the type locality is undertaken, it is impossible to comment on the conservation status of the species. The species is assessed as Data Deficient (DD) according to IUCN criteria (2014).

Notes. *Myrcia caesariata* is a larger-leaved species, with blades to 21 cm, possibly related to McVaugh's (1958) *Marlierea* sect. *Myrciopsis* based on the possession of mixed terminal and lateral bunches of reduced cymose panicles. Flowers are

completely closed in the bud; panicles and buds are covered with dense, red, felty hairs.

- 15. *Myrcia calcicola*** Proctor, J. Arnold Arbor. 63: 281. 1982. TYPE: [Jamaica.] E slope of John Crow Mtns., 1.5–2.5 mi. S of Ecclesdown, 27 July 1963, G. R. Proctor 23871 (holotype, A-00071063!; isotype, GH-00071064!). [Species group B].

Habitat and distribution. *Myrcia calcicola* is a montane species endemic to Jamaica at altitudes of ca. 1500–2500 m.

IUCN Red List category. *Myrcia calcicola* is known only from the type, which we have not been able to view. *Myrcia calcicola* is assessed as Data Deficient (DD) according to IUCN criteria (2014).

Notes. The original description of *Myrcia calcicola* indicates four calyx lobes that fall cleanly from the hypanthium and a cymose, terminal inflorescence. We cautiously assign this species to *Myrcia* sect. *Aulomyrcia*. *Myrcia calcicola* was listed by Adams (1972: 517) as “species A”; however, a duplicate of the type collection was apparently not deposited in Jamaica.

- 16. *Myrcia cana*** (McVaugh) E. Lucas & C. E. Wilson, comb. nov. Basionym: *Marlierea cana* McVaugh, Mem. New York Bot. Gard. 10: 82. 1958. TYPE: Venezuela. Amazonas: Cerro Duida, Rio Cunucunuma, 22 Nov. 1950, B. Maguire 29653 (holotype, MICH-1109605!; isotypes, NY-405291!, VEN-41604!). [Species group B].

Habitat and distribution. *Myrcia cana* is known from higher altitudinal forests of Amazonas Province, Venezuela, from altitudes of 1100–1800 m.

IUCN Red List category. *Myrcia cana* has an EOO of ca. 500 km² and is known from only three collections. This species has been collected within the Duida-Marahuaca National Park (WDPA, 2015); at the time of writing, this park is not locally respected (EOE, 2015). *Myrcia cana* is assessed as Endangered (EN) according to IUCN criteria (2014).

Notes. *Myrcia cana* is an unusual species with shortly petiolate, coriaceous, revolute leaves, shiny adaxially, with a convex midvein and darkened petioles. Inflorescences are mixed axillary and terminal paniculate cymes with broad, flattened rachises. Buds are completely closed, the calyx

tearing open into extremely irregular lobes to a nearly perfect calyptra. The flowers and fruits dry black and are covered in pale hairs; fruits are globose with a neat ring of hypanthial remains similar to those in clade 7 of Lucas et al. (2011). The tearing calyx and a somewhat zigzagged arrangement of the primary axis of the inflorescence place the species in *Myrcia* sect. *Aulomyrcia*.

Selected specimen. VENEZUELA. **Amazonas:** Atabapo, Serrania del Paru (Aroko), Huber 4337 (K, NY).

- 17. *Myrcia caudata*** (McVaugh) E. Lucas & C. E. Wilson, comb. nov. Basionym: *Marlierea caudata* McVaugh, Fieldiana, Bot. 29: 176. 1956. TYPE: Peru. Loreto: Mishuyacu, near Iquitos, Oct.–Nov. 1929, G. Klug 235 (holotype, F-0040040F!; isotypes, NY-00405292!, US-00117784!). [Species group B].

Habitat and distribution. *Myrcia caudata* has been collected from forests of southern Venezuela to Peru at an altitude of ca. 100 m.

IUCN Red List category. *Myrcia caudata* is a widespread species known to us from over 30 collections from more than 20 independent localities and well represented in online herbaria (EOO > 1.6 million km²). The species is of Least Concern (LC) according to IUCN criteria (2014). Holst (2002) provided further description and suggested unqualified affinity to *M. neoschomburgkiana*.

Notes. *Myrcia caudata* is a species with short (to 5 cm), pronounced acuminate leaves with somewhat blunt acumen, no secondary venation, and a raised midvein. Inflorescences are mixed terminal and lateral bunches of panicles reduced to appear racemose in places, with flattened rachises and covered with silky hairs. The calyx appears to fall cleanly from the globose fruit, leaving a smooth, circular scar.

Selected specimens. BRAZIL. **Acre:** vic. Serra da Moa, Prance 12299 (K). **Amazonas:** Manaus, Res. Flor. Ducke, Manaus–Itacoatiara, Km. 26, Vicentini 542 (K). **Mato Grosso:** Sinop, 7 km E of BR 163 N of Rio Celeste, 51 km S of Sinop, Thomas 3864 (K). **Pará:** BR 163, Cuiabá–Santarém Hwy., Km. 1234, Prance 25536 (K). **Rondônia:** Porto Velho, Represa Samuel, end of E dike rd., Thomas 5095 (K). COLOMBIA. **Caquetá:** Parque Nac. Chiribiquete. Rio Cunare–Raudal del tubo, Fund. Biol. Puerti Rastrojo 57 (K). PERU. **Loreto:** Maynas, Iquitos, Nina rumi, Rio Nanay, Vasquez 8952 (NY).

- 18. *Myrcia chonodisca*** E. Lucas & C. E. Wilson, nom. nov. Replaced name: *Marlierea salticola* Amshoff, Bull. Torrey Bot. Club 75: 529. 1948,

non *Myrcia salticola* (Steyerm.) McVaugh, Mem. New York Bot. Gard. 18. 1969. TYPE: British Guiana [Guyana]. Amatuk Portage: Potaro River Gorge, *B. Maguire* 23549 (holotype, NY-00405301!; isotypes, F-0065395FF!, GH-00069926!, K-000261027!, MO-313521!, P-01902220RB!, RB-00542135!, U-0008497!, U-0007908US!, US-00117791!, VEN-29052!). [Species group B].

Habitat and distribution. *Myrcia chonodisca* is apparently endemic to the Potaro River; it is described in the protologue as locally common on rocks in falls and restricted to riverbeds at an altitude of ca. 400 m.

IUCN Red List category. *Myrcia chonodisca* is known to us from two collections from close to the relatively well-collected but unprotected type locality, suggesting a restricted population. This area is not under any known immediate environmental threat, but should this change, threat would immediately increase. *Myrcia chonodisca* is assessed as Vulnerable (VU D2) according to IUCN criteria (2014).

Notes. The protologue of *Myrcia chonodisca* describes a closed bud and suggests absent petals; it further suggests an affinity with *M. neomontana* E. Lucas & C. E. Wilson that we do not detect. With groups of short cymes with flat rachises emerging at the terminal node and pointed buds, there is a strong resemblance between this species and those of *Calypttranthes*.

Selected specimen. GUYANA. **Potaro-Siparuni:** Kangaruma, Potaro River, Essequeibo, *Abraham* 337 (K).

19. *Myrcia clavija* Sobral, Novon 16: 520. 2006. TYPE: Brazil. Minas Gerais: Descoberto, 15 June 2001, *R. Forzza* 2193 (holotype, CES not seen; isotypes, RB-00542144!, RB-00722663!). [Species group A].

Habitat and distribution. *Myrcia clavija* has been collected from the Atlantic forests of Minas Gerais and is endemic to the Reserva Biológica da Represa do Grama, at altitudes of ca. 100–1000 m.

IUCN Red List category. *Myrcia clavija* is calculated in the protologue as being Data Deficient (DD) according to IUCN criteria (2014).

Notes. *Myrcia clavija* is a distinctive species with up to 10 straplike leaves whorled at a single node; the

midveins are raised and the species has multiple long, whorled, terminal panicles. *Myrcia clavija* is similar to *M. hexasticha*, *M. tetraphylla*, and their related species but differs from these in consistently having more than six leaves per node and aristate calyx lobes.

Selected specimen. BRAZIL. **Minas Gerais:** Descoberto, Res. Biol. Represa do Grama, *Lucas* 244 (K).

20. *Myrcia coelosepala* Kiaersk., Enum. Myrt. Bras. 81. 1893. TYPE: Brazil. Rio de Janeiro, Nova Friburgo, 15 Jan. 1882, *A. F. M. Glaziou* 13893 (lectotype, designated here, C-10012832!; isotypes, BR-0000005238644!, C-10015831!, F-0065459F!, F-0065462F!, F-0065461F!, F-0065464F!, F-0065460F!, G-00222564!, K-000342714!, K-000342715!, LE-00007141!, NY-405401!, P-00161311!, P-00161312!, R-000009023!, US-00048347!). [Species group C].

Aulomyrcia cambessedean O. Berg, Linnaea 27: 40. 1855, syn. nov. TYPE: [Brazil. Minas Gerais:], Carrascos, montis Serra Negra, s.d., *A. F. C. de Saint-Hilaire* 115 (lectotype, designated here, P-00161477!; isotype, P [2!]).

Myrcia amblyphylla Kiaersk., Enum. Myrt. Bras., 76. 1893, syn. nov. TYPE: [Brazil. Minas Gerais:], Caraça, 20 Feb. 1884, *A. F. M. Glaziou* 14831 (lectotype, designated here, C-10015821!; isotypes, LE-00007128!, P-00161487!).

Habitat and distribution. *Myrcia coelosepala* is found in Brazil from Bahia, Minas Gerais to São Paulo in cerrado, gallery, and Atlantic forest at altitudes of 900–1500 m.

IUCN Red List category. *Myrcia coelosepala* is known to us from six collections, with several reliably named specimens available online (speciesLink, 2015) giving an EOO of ca. 82,000 km², occurring in well-protected national parks in each of the states where it occurs. *Myrcia coelosepala* is assessed as Least Concern (LC) according to IUCN criteria (2014).

Notes. *Myrcia coelosepala* is distinguished by its oblong-elliptic leaves with evident glands and veins abaxially; the species is distinguished from *M. obovata* (O. Berg) Nied. by its longer, normally discoloured leaves with evident venation and possession of two locules (vs. three in *M. obovata*). *Myrcia coelosepala* is distinguished from *M. littoralis* by glabrous buds and inflorescences (vs. a usual covering of trichomes in *M. littoralis*). *Myrcia littoralis* is restricted to coastal restinga vegetation, while *M. coelosepala* occurs in mountainous regions. Kiaerskou described *M. amblyphylla* at the same time as *M. coelosepala* and associated the former with

Aulomyrcia cambessedean; the only difference among these species is the more acute leaf tips of *M. coelosepala*. The three names are synonymized here, maintaining the more frequently used *Myrcia* name. The name *M. coelosepala* is selected instead of making a new combination based on the oldest basionym *A. cambessedean*. The resulting combination would be blocked by *M. cambessedesiana* O. Berg (Art. 60.7: McNeill et al., 2012).

Selected specimens. BRAZIL. **Bahia:** Palmeiras, Morro do Pai Inácio, *Giulietti* 773 (BHCB). **Minas Gerais:** Lima Duarte, Parque Estadual da Serra do Ibitipoca, *Lucas* 267 (K). **Rio de Janeiro:** Nova Friburgo, Morro Curusu, 15 July 1987, *Pessoa* 181 (RB); Itatiaia, 1918, *Campos Porto* 710 (RB). **São Paulo:** Capital, nativa no Jardim Botânico, *Kuhlmann* 3343 (K).

21. *Myrcia colpodes* Kiaersk., Enum. Myrt. Bras., 80. 1893. TYPE: Brazil. Rio de Janeiro: Praia Grande, au Morro da Viração, 12 Mar. 1862, *A. F. M. Glaziou* 832 (lectotype, designated here, C-10015833!; isoelectotypes, BR-0000005238972!, BR-0000005239917, C-10015834!, P-00161301!). [Species group A].

Habitat and distribution. *Myrcia colpodes* is known from littoral areas (restinga), and Atlantic rainforests of southeastern Brazil (Rio de Janeiro) at an altitude of ca. 20 m.

IUCN Red List category. *Myrcia colpodes* is known only from the type and one other 19th century collection from a relatively well-collected area; this species has an extremely restricted population. The Atlantic forests of Rio de Janeiro are under constant and immediate threat from anthropogenic developments. This species is assessed as Critically Endangered (CR) according to IUCN criteria (2014).

Notes. *Myrcia colpodes* has pubescent branchlets, long, coriaceous leaves with raised midveins, and long, whorled, terminal inflorescences to 22 cm. *Myrcia colpodes* is similar to species such as *M. eumecephylla*, *M. gigantea*, or *M. hexasticha*, but it is distinct from these in its markedly bullate leaves.

Selected specimen. BRAZIL. **Rio de Janeiro:** Cova de Onça, *Glaziou* s.n. (K).

22. *Myrcia compta* McVaugh, Mem. New York Bot. Gard. 18: 82. 1969. TYPE: Venezuela. Cerro Sipapo, 14 Jan. 1949, *B. Maguire* 28338 (holotype, MICH-1109473!; isotypes, NY-00405402!, S-052415!, US-0011774!, VEN-75724!). [Species group B].

Habitat and distribution. *Myrcia compta* is endemic to the forests of Venezuela, Amazonas Province, from altitudes of ca. 1600–2000 m.

IUCN Red List category. *Myrcia compta* is known only from the type and paratype collections, all from the Cerro Sipapo, a relatively poorly known and collected area. This species appears to have an extremely restricted EOO. The forests of the Cerro Sipapo are, however, protected by the Sipapo Forest Reserve. The species is assessed as Least Concern (LC) according to IUCN criteria (2014).

Notes. *Myrcia compta* is a species with coriaceous, sharply acuminate, discolourous, leaves with revolute margins and raised midribs on both faces of the blades. Aggregations of short, lateral, reduced inflorescences covered in silky red hairs suggest a relationship with species of McVaugh's (1958) *Marlierea* sect. *Myrciopsis*.

23. *Myrcia connata* McVaugh, Fieldiana, Bot. 29: 189. 1956. TYPE: Bolivia. La Paz: S Yungas, basin of Rio Bopi, San Bartolome (near Calisaya), 1–22 July 1939, *B. A. Krukoff* 10382 (holotype, NY-00004779!; isotypes, A-00071082!, CAS-0003587!, F-0065463F!, LP-010394!, MICH-1109470!, MO-313565!, S-052418!, U-0005100!, US-00117742!, WIS-00000205!). [No species group assignment].

Habitat and distribution. *Myrcia connata* is known from Bolivian “bosque primario” at altitudes of 750–900 m.

IUCN Red List category. *Myrcia connata* is known to us only from the type; we could find no additional information regarding environmental threat to the type locality. *Myrcia connata* is assessed as Data Deficient (DD) according to IUCN criteria (2014).

Notes. *Myrcia connata* is distinct in having cordate, connate leaf bases and hispid branchlets. Inflorescences are terminal or subterminal. Leaves are decussate; the midvein is concave. The hypanthium, petals, and calyx lobes bear silky golden hairs. The hypanthium is somewhat ridged, calyx lobes are broad and blunt, and the disk is hairy. Despite sharing characters of silky pubescence with species previously accepted in *Gomidesia*, we ascribe the species to *Myrcia* sect. *Aulomyrcia* based on the leaf and inflorescence architecture and extended hypanthium.

24. *Myrcia convexivenia* (B. Holst) E. Lucas & C. E. Wilson, comb. nov. Basionym: *Marlierea convexivenia* B. Holst, Selbyana 23: 144. 2002. TYPE: Venezuela. Amazonas: Casiquiare, Caño San Miguel, sector Las Tinajas y el Caño Iqueven, 24 Apr. 1991, G. Aymard 9151 (holotype, PORT-58161!; isotype, SEL-003102!). [Species group B].

Habitat and distribution. *Myrcia convexivenia* has been collected from white sand and scrub forests along black water rivers in southern Venezuela at an altitude of ca. 200 m.

IUCN Red List category. *Myrcia convexivenia* is known from the four collections cited in the protologue that give an EOO of ca. 20,000 km², the limit for an IUCN (2014) category of threat. The species is assessed as Least Concern (LC) according to IUCN criteria (2014).

Notes. *Myrcia convexivenia* is contrasted in the protologue (Holst, 2002) with *M. caesariata*. *Myrcia convexivenia* differs in having narrower leaves and unusually racemose inflorescences; this is evident from the type collection.

Selected specimen. VENEZUELA. **Amazonas:** “Sabana Grande” del Río Pasimoni, a altura de Pueblo Viejo, Stergios 13341 (NY).

25. *Myrcia decorticans* DC., Prodr. [de Candolle] 3: 252. 1828. *Aulomyrcia polymorpha* O. Berg var. *decorticans* (DC.) O. Berg in C. F. P. von Martius & auct. suc. (eds.), Fl. Bras. 14: 78. 1857. TYPE: [Brazil.] Brasilia, s.d., C. F. P. Martius s.n. (lectotype, designated here, M-0136901!; isotype, M-0136900!). [Species group C].

Aulomyrcia salzmannii O. Berg in C. F. P. von Martius & auct. suc. (eds.), Fl. Bras. 14: 116. 1857, syn. nov. TYPE: [Brazil. Bahia], s.d., P. Salzmann 279 (lectotype, designated here, G-00222034!; isotype, G-00222035!).

Habitat and distribution. *Myrcia decorticans* is a forest species distributed from Tobago to northeastern Brazil at altitudes from 100 to 700 m.

IUCN Red List category. *Myrcia decorticans* is a widespread species known to us from 50 collections from 30 localities and is well represented in online herbaria. It has an EOO > 1.6 million km²; the species is of Least Concern (LC) according to IUCN criteria (2014).

Notes. McVaugh (1969) followed Berg (1855–1856) in accepting multiple species in synonymy of *Myrcia decorticans* (in the case of Berg, under *Aulomyrcia polymorpha* O. Berg). It is clear from McVaugh’s discussion as well as material examined that there are distinct entities within what is currently known as *M. decorticans*. Most obviously, the type specimen from Bahia is a stouter, more pubescent species than any collection made from the Amazon, the Guianas, or the Antilles; there are also differences in inflorescence architecture. The entities are united in having internally pubescent calyx lobes, somewhat open venation, and apiculate leaves. Amazonian collections can have corky petioles and the largest (up to 2 cm diameter) fruits in the *decorticans* complex of Holst (2002). These entities are here treated together; however, it is clear that more detailed study is required.

Selected specimens. BRAZIL. **Bahia:** Mata de São João, Praia do Forte, na beira da avenida de entrada, Lima 406 (K). **Sergipe:** Crasto, ca. 2 km na estrada Crasto para Santa Luzia do Itanhi, de Carvalho 4345 (NY). FRENCH GUIANA. Crique Kulumuli, Mont Saint-Marcel, Bassin de l’Oyapock, Sastre 4634 (CAY). GUYANA. **Pomeroon-Supenaam:** Chaakoitou, near Mtn. Point, S of Kanuku Mtns. forest near Tutuwau Falls, Maas 4053 (K). VENEZUELA. **Bolívar:** NE of Upata, El Paráiso camp, Breteker 5088 (K).

26. *Myrcia diaphana* (O. Berg) N. Silveira, Roessleria 7: 66. 1985. Basionym: *Aulomyrcia diaphana* O. Berg in C. F. P. von Martius & auct. suc. (eds.), Fl. Bras. 14: 82. 1857. TYPE: [Brazil.] São Paulo, s.d., F. Sellow s.n. (holotype, B†; lectotype, designated here, K-000342814!; isotype, BR-0000005280582!, F-0064708F!, LE-00007051!, P-00163051!, P-00163052!). [Species group C].

Habitat and distribution. *Myrcia diaphana* was collected from forested hills of southeastern Brazil from an altitude not precisely known.

IUCN Red List category. *Myrcia diaphana* is known only from the type from an unspecified locality. It is assessed as Data Deficient (DD) according to IUCN criteria (2014).

Notes. *Myrcia diaphana* is a bilocular species strongly resembling *M. multiflora* in leaf shape, texture, and venation. It is known only from the type; it is possible that this is synonymous with that latter species.

27. *Myrcia dichrophylla* D. Legrand, Sellowia 13: 294. 1961. TYPE: Brazil. Santa Catarina: Monte

Crista, Garuva, S. Francisco do Sul, 22 Dec. 1957, *R. Reitz* 5908 (holotype, MVM not seen; isotypes, HAS not seen, HBR not seen, HUEFS not seen, MBM not seen, NY not seen, PACA not seen, US-00117747!). [Species group C].

Habitat and distribution. *Myrcia dichrophylla* is found from Rio de Janeiro to Rio Grande do Sul from coastal restinga and dense ombrophilous forests at altitudes of 0–500 m.

IUCN Red List category. *Myrcia dichrophylla* is known to us from seven collections but reliably named collections are common in online specimen databases (speciesLink, 2015), giving an EOO of ca. 80,000 km². *Myrcia dichrophylla* is assessed as Least Concern (LC) according to IUCN criteria (2014).

Notes. *Myrcia dichrophylla* is recognized by its discolored and completely glabrous leaves.

Selected specimens. BRAZIL. **Paraná:** Guaratuba, Brejatuba, *Silva* 1015 (MBM). **Santa Catarina:** Florianópolis, Morro do Ribeirão, *Klein* 7394 (MBM). **São Paulo:** Iguape, Estação Ecológica Juréia-Itatins, *Nicolau* 254 (SP).

28. *Myrcia egensis* (O. Berg) McVaugh, Fieldiana, Bot. 29: 191. 1956. Basionym: *Aulomyrcia egensis* O. Berg in C. F. P. von Martius & auct. suc. (eds.), Fl. Bras. 14: 99. 1857. TYPE: [Brazil.] Amazonas: Solimões, 1831, *E. F. Poeppig* 2551 (lectotype, designated here, W-0033253!; isoelectotypes, F-0064711FF!, G-00222531G!, W-0032623!, W-18890212639!). [Species group C].

Habitat and distribution. *Myrcia egensis* is noted from moist forests in northern Brazil to Peru; its altitude is not precisely known.

IUCN Red List category. *Myrcia egensis* is known to us only from the type from an unspecified locality in Brazil. Material from Peru was cited by McVaugh (1963) that increased the EOO of this species and suggested an unconfirmed altitude of 1200–1300 m. More information on those collections and threats to these areas is required before a category of threat is assigned. For now, the species is Data Deficient (DD) according to IUCN criteria (2014).

Notes. *Myrcia egensis* is a distinctive species with discolored leaves and open venation. The inflorescences are in terminal axils, in short, distinctive, asymmetrical panicles; the fruits are covered by pale hairs and bear five calyx lobes.

Selected specimen. PERU. **San Martín:** Moyobamba, *Klug* 3569 (MO not seen).

29. *Myrcia ehrenbergiana* (O. Berg) McVaugh, Mem. New York Bot. Gard. 18: 85. 1969. Basionym: *Myrciaria ehrenbergiana* O. Berg, Linnaea 27: 321. 1856. *Aulomyrcia ehrenbergiana* (O. Berg) Amshoff, Recueil Trav. Bot. Néerl. 42: 8. 1950. TYPE: British Guiana. Roraima, 1842–1843, *Rob. Schomburgk* 700 (lectotype, designated here, W-0029521!; isoelectotypes, BM-000953656!, G-00222404!, K-000342848!, K-000342849!, MICH-1109534!, P-00735122!, P-00735123!, U-0046438!, W-18890013678!). [No species group assignment].

Habitat and distribution. *Myrcia ehrenbergiana* is a montane species distributed from northern South America to northern Brazil from an altitude of ca. 1065 m.

IUCN Red List category. *Myrcia ehrenbergiana* is known to us from eight collections from seven independent localities, giving an EOO of ca. 34,000 km². This EOO falls beyond the IUCN criteria of threat; however, the relatively few and far apart locations from which the specimens have been located suggest a fragmented population. Therefore, *M. ehrenbergiana* is assessed as Near Threatened (NT) according to IUCN criteria (2014).

Notes. *Myrcia ehrenbergiana* is a distinctive species with subsessile, cordate, lustrous leaves with revolute margins and 4-merous flowers. This species has a flat to raised midvein adaxially and a concentration of long, asymmetrical inflorescences toward the ends of the branchlets. *Myrcia ehrenbergiana* is reminiscent of *M. subulata* in having a terminal inflorescence; however, the inflorescence is not whorled or subtended by foliaceous bracts.

Selected specimens. BRAZIL. **Roraima:** Vitoria, Serrinha, Rio Mucajai, summit of serra, *Prance* 4225 (K). GUYANA. **Upper Takutu–Upper Essequibo:** S Pakaraima Mtns., Tipuru River, 4 km upstream from Ireng River, trail to Tipuru village, *Hoffman* 1908 (K); Kanuku Mtns., *Jansen-Jacobs* 278 (K).

30. *Myrcia ensiformis* (McVaugh) E. Lucas & C. E. Wilson, comb. nov. Basionym: *Marlierea ensiformis* McVaugh, Mem. New York Bot. Gard. 18: 64. 1969. TYPE: Venezuela. Amazonas: Serra de Neblina expedition, Camp 5, 24–25 Nov. 1965, *B. Maguire* 60418 (holotype, MICH not seen; isotypes, MIN-1002847!, MO-313523!,

NY-563997!, US-00117786!, VEN-411284!). [Species group B].

Habitat and distribution. *Myrcia ensiformis* was collected from the Serra da Neblina, on the borders of southern Venezuela and northern Brazil; the species is recorded from an altitude of ca. 750 m.

IUCN Red List category. *Myrcia ensiformis* is known only from the type collection. The area in which it was collected is unprotected (WDPA, 2015); however, due to the inaccessibility of the area, the ecoregion is largely intact (EOE, 2015) and the species remains poorly collected. Until more field-work is undertaken in this area, it is difficult to determine if the distribution of this species has been reduced or whether the species is simply rare. This is assessed as Data Deficient (DD) according to IUCN criteria (2014).

Notes. McVaugh (1969) was unsure of the affinities of *Myrcia ensiformis*, but, based on its winged internodes, terminal and axillary cymose inflorescences with flattened axes, and prolonged hypanthia splitting between the calyx lobes, he associated his *Marlierea ensiformis* with *Marlierea* sect. *Myrciopsis*. In leaf and inflorescence architecture, this species is similar to *Myrcia caesariata* and *M. biptera*; however, in *M. ensiformis*, although the calyx lobes are irregular, there was no tendency observed for one larger lobe to appear calyptrate. Leaves reach 16 cm; the whole plant is glabrous.

31. *Myrcia eumecephylla* (O. Berg) Nied., Nat. Pflanzenfam. 3(7): 76. 1893. Basionym: *Aulomyrcia eumecephylla* O. Berg in C. F. P. von Martius & auct. suc. (eds.), Fl. Bras. 14: 98. 1857. TYPE: [Brazil.] São Paulo, s.d., *F. Sellow* s.n. (holotype, B†; lectotype, designated here, LE-00007060!). [Species group A].

Myrcia limae G. M. Barroso & Peixoto, Acta Bot. Brasil. 4 (2): 11. 1990, syn. nov. TYPE: [Brazil.] Espírito Santo: Reserva Biol. Sooretama, Aug. 1969, *D. Sucre* 9660 (lectotype, designated here, RB-00542154!; islectotype, RB-00557164!).

Habitat and distribution. *Myrcia eumecephylla* is known from tabuleiro and ombrophilous Atlantic forest of Brazil (southern Bahia and Espírito Santo to São Paulo); it is noted from altitudes of ca. 5–200 m.

IUCN Red List category. The type of *Myrcia eumecephylla* was from São Paulo; it has not been recollected at the type locality since the mid-19th century. Collections available online (speciesLink,

2015) indicate further collections from southern Bahia and the EOO is greater than that required to assign an IUCN category of threat. However, the species has only recently been collected from Espírito Santo from sites within 100 km of each other, and threats to this part of the Atlantic forest are high. The species grows within the Sooretama Biological Reserve, and, with this protection in place, the species should be secure. It is assessed as Least Concern (LC) according to IUCN criteria (2014).

Notes. *Myrcia eumecephylla* is a species distinguished by its large (to 30 cm), subsessile leaves; cordate bases and raised adaxial midveins on blades; and terminal, decussate inflorescences to 20 cm with persistent, foliaceous bracts and sessile flowers. This species has an affinity with species such as *M. gigantea*, *M. hexasticha*, *M. neoverticillaris* E. Lucas & C. E. Wilson, and *M. insularis*.

Selected specimen. BRAZIL. **Espírito Santo:** Reserva Nat. Vale, 11 Sep. 2009, *Folli* 6414 (K).

32. *Myrcia excoriata* (Mart.) E. Lucas & C. E. Wilson, comb. nov. Basionym: *Marlierea excoriata* Mart., Flora 20 (2 Beibl.): 88. 1837. TYPE: [Brazil.] Corcovado et alibi in nemoribus prov. Rio de Janeiro, 1837, *C. F. P. Martius* 59 (lectotype, designated here, BR-0000005299362!; islectotypes, E-00433027!, G-00223337!, K-000330690!, M-0171101!, MO-176997!, NY-00405294!, P-00217945!, P-00217946!). [No species group assignment].

Marlierea parviflora O. Berg in C. F. P. von Martius & auct. suc. (eds.), Fl. Bras. 14: 537. 1859. TYPE: [Brazil.] In silvis umbrosis montosis montium Serra d'Estrella, Feb. 1824, *L. Riedel* s.n. (lectotype, designated here, LE-00004034!; islectotypes, G-00223345!, K-000330492!, K-000330693!, LE [2]!, M!, MO-2386046!, NY-405300!, S-052560!, U-0005080!).

Habitat and distribution. *Myrcia excoriata* is known from the Atlantic forests of eastern and southern Brazil (Bahia to Rio Grande do Sul) from 50 to 1500 m.

IUCN Red List category. *Myrcia excoriata* is known to us from 21 collections from 18 localities with an EOO > 650,000 km². *Myrcia excoriata* is considered of Least Concern (LC) according to IUCN criteria (2014).

Notes. *Myrcia excoriata* has short, terminal, and axillary inflorescences to 6(–7) cm, with small persistent triangular bracts below the flowers. Flowers tear into the staminal disk giving a characteristic 5-pointed star appearance. Bark peels in thin strips

from branchlets. Specimens collected south of São Paulo are consistently somewhat different from the type, with slightly thicker, discolored leaves and wider, flattened inflorescence rachises. Legrand and Klein (1971) described this material as *Marlierea parviflora*, now synonymous with *Myrcia excoriata* (Sobral et al., 2015). *Myrcia excoriata* is similar to *M. obscura* (O. Berg) N. Silveira but differs in having smaller, more acuminate leaves.

Selected specimens. BRAZIL. **Bahia:** Valença, Estrada Valença/Guaibim, Km. 10, *de Carvalho 1128* (K). **Espírito Santo:** 1 km W of Venda Nova de Imigrante, 5–7 km de la rod. BR 262, *Arbo 7746* (K). **Minas Gerais:** Reserva Biol. da Represa do Gramma, trilha principal partindo da casa de Seu Luiz, *Lucas 233* (K). **Paraná:** Bocaiúva do Sul, Trilha na borda do Rio Capivari, *Lucas 151* (K). **Rio de Janeiro:** Guanabara, Morro Taquara da Tijuca, *Sucre 8180* (K). **Santa Catarina:** Matador, Rio do Sul, *Reitz 7336* (K).

33. *Myrcia exploratoris* McVaugh, Mem. New York Bot. Gard. 18: 86. 1969. TYPE: Venezuela. Bolívar: upper slopes of Carrao-tepuí, 7 Dec. 1944, *J. A. Steyermark 60879* (holotype, F-0065481F!; isotype, U-0005140!). [Species group C].

Habitat and distribution. *Myrcia exploratoris* is found in Guyana, Suriname, and Venezuela at altitudes above 2000 m.

IUCN Red List category. *Myrcia exploratoris* is known to us from three collections from two localities. These in addition to three reliably named collections available online (TROPICOS®, 2015) give an EOO of ca. 45,000 km², disqualifying it from a category of threat (IUCN, 2014). However, the species is known from high elevations only and as such will have a considerably smaller real distribution. The Myrtaceae of the Guiana Highlands are relatively well known (McVaugh, 1958, 1969), suggesting that the low number of collections reflects a rare species. However, no specific threat is known to any of the regions from which the species has been found; it was last collected in 1991. It is assessed as Least Concern (LC) according to IUCN criteria (2014).

Notes. *Myrcia exploratoris* has obovate leaves held erect on the branch; in this respect, and in respect of the silky hairs that cover the inflorescence and hypanthium, it resembles *M. littoralis*. The distribution is widely disjunct, however, and the latter species occurs exclusively close to sea level. The leaves of *M. exploratoris* are larger and more coriaceous than those of *M. littoralis*. The leaves and general architecture of *M. exploratoris* are reminis-

cent of *M. platyclada* as the latter species is also glabrous.

Selected specimens. GUYANA. **Cuyuni-Mazaruni:** Paruima, 15 km W, 0.25 km E of camp near eastern summit of Waukauyengtipu, *Clarke 5735* (K). VENEZUELA. **Bolívar:** Meseta del Jaua, Cerro Jaua, *Steyermark 109545* (K).

34. *Myrcia extranea* McVaugh, Mem. New York Bot. Gard. 18: 87. 1969. TYPE: British Guiana. Kaiteur Plateau, near Kaiteur Falls, 20 Mar. 1962, *R. S. Cowan 2248* (holotype, MICH-1109521!; isotypes, K-000342850!, NY-00004781!, US-00117750!). [No species group assignment].

Habitat and distribution. *Myrcia extranea* was collected from the Kaiteur Plateau near Kaiteur waterfall in Guyana at an altitude of ca. 400 m.

IUCN Red List category. *Myrcia extranea* is known to us only from the type and paratype specimens from a single locality, suggesting a restricted population from a relatively well-collected area. Protection offered by the Kaiteur National Park prevents an environmental threat category for this species, which is assessed as Least Concern (LC) according to IUCN criteria (2014).

Notes. The protologue for *Myrcia extranea* suggested an affinity with *M. minutiflora*, although McVaugh (1969) commented on the need for flowering material. The type specimen has leaves with rather open venation and shortened pedicels very similar to *M. minutiflora* but differs in having persistent calyx lobes and pubescence on the interior of the hypanthium (McVaugh, 1969).

35. *Myrcia ferruginea* (Poir.) DC., Prodr. [de Candolle] 3: 245. 1828. Basionym: *Eugenia ferruginea* Poir. in J. B. A. P. M. de Lamarck, Encycl., Suppl. 3: 124. 1813. *Marlierea ferruginea* (Poir.) McVaugh, Mem. New York Bot. Gard. 10: 83. 1958. *Krugia ferruginea* (Poir.) Urb., Bot. Jahrb. Syst. 19(5): 604. 1895. *Myrtus ferruginea* (Poir.) Spreng., Syst. Veg. 2: 487. 1825. TYPE: [French Guiana.] Cayenne, s.d., *herb. Poiret s.n.* (lectotype, designated here [likely holotype], P-01817729!). [Species group B].

Habitat and distribution. *Myrcia ferruginea* occurs on the Windward Islands and in northwestern South America between altitudes of 250 and 1700 m.

IUCN Red List category. *Myrcia ferruginea* is a widespread species with an EOO > 300,000 km².

The species is assessed as Least Concern (LC) according to IUCN criteria (2014).

Notes. *Krugia* was distinguished from *Myrcia* by Urban (1893) based on the petals that adhere to the calyx. *Myrcia ferruginea* is very distinctive with dense, ferruginous indumentum and a terminal inflorescence with bracts at the nodes. The overall architecture, especially of the asymmetrical inflorescence, suggests this species belongs to *Myrcia* sect. *Aulomyrcia*; Rosário and Secco (2006) suggested an affinity with *M. neovelutina* E. Lucas & C. E. Wilson. However, the poorly defined calyx lobes and partial hypanthial tearing are also reminiscent of species previously described in *Eugeniopsis* O. Berg (Santos, pers. comm.).

Selected specimens. COLOMBIA. **Caquetá:** Parque Nacional Chiribiquete, Rio Mesay, Jacamiya Raudal, *Fundacion Biologica Puerti Rastrojo CHI22* (K). FRENCH GUIANA. Grand Inini, Saut Batadeau, *de Granville B3788* (K). GRENADA. Grand Etang, *Beard 590* (K). GUYANA. **Cuyuni-Mazaruni:** N foothills of Roraima, betw. camps 3 & 4, *Hahn 5357* (CAY). ST. VINCENT. s. loc., s.d., *Smith s.n.* (K). SURINAME. **Marowijne:** Lely Mtns., airstrip, plateau, lateritic rocky soil, *Jansen-Jacobs 6720* (K). TRINIDAD AND TOBAGO. Aripo Rd., 5 mi. post, *Broadway 6556* (K). VENEZUELA. **Bolívar:** Piar, Rio Aparaman, affluent of Rio Acanan, *Holst 3475* (K).

36. *Myrcia fusca* B. Holst & M. L. Kawas., Selbyana 25: 95. 2004. TYPE: Panama. El Llano–Cartí Rd., 9.6–11 km from Inter-American Hwy., 4 Dec. 1974, *S. Mori 3541* (holotype, MO-671228!; isotypes, MICH not seen, PMA not seen, SEL not seen). [Species group C].

Habitat and distribution. *Myrcia fusca* is found in the wet forests of Panama at altitudes of ca. 30–500 m.

IUCN Red List category. *Myrcia fusca* is known to us from the type and four authoritatively identified specimens from TROPICOS® (2015) that give an EOO of ca. 30 km². The species has been relatively well collected and recently collected; the restricted distribution in unprotected forest, however, makes it vulnerable to stochastic change and is assessed as Vulnerable (VU D2) according to IUCN criteria (2014).

Notes. The protologue links *Myrcia fusca* with the decorticans complex of Kawasaki and Holst (1994) and reports *M. fusca* to be the northernmost species in the complex. The species is distinguished by sessile, cordate leaves with impressed secondary venation. The inflorescence is terminal with long axes (to 15 cm) with architecture similar to that of the

littoral Atlantic forests such as *M. hexasticha*; however, the inflorescence of *M. fusca* is not whorled. *Myrcia fusca* recalls *M. subulata*.

37. *Myrcia gentryi* B. Holst, BioLlania 10: 4. 1994. TYPE: Venezuela. Amazonas: Atabapo, Cerro Huachamacari, 1 Mar. 1985, *R. Liesner 18140* (holotype, MO-313563!; isotypes, NY-1051785!, SEL-001749!, VEN-365080!). [Species group B].

Habitat and distribution. *Myrcia gentryi* is found in gallery forest and open areas of Venezuela at an altitude of ca. 1700 m.

IUCN Red List category. *Myrcia gentryi* is known only from the type collection from a relatively poorly known and collected area. This species appears to have a restricted EOO. Nevertheless, Cerro Huachamacari is protected in the Duida-Marahuaca National Park. *Myrcia gentryi* is of Least Concern (LC) according to IUCN criteria (2014).

Notes. *Myrcia gentryi* is remarkable in its small leaves (to 2 cm) and its uniflorous 4- or 5-merous inflorescences, extremely rare in *Myrcia*. The protologue compares this species to *M. minutiflora*, *M. bolivarensis*, and *M. uniflora* (McVaugh) E. Lucas & C. E. Wilson.

38. *Myrcia gigantea* (O. Berg) Nied., Nat. Pflanzenfam. 3(7): 76. 1893. Basionym: *Aulomyrcia gigantea* O. Berg in C. F. P. von Martius & auct. suc. (eds.), Fl. Bras. 14: 548. 1859. TYPE: [Brazil. Bahia:] Ilheos [Ilheus], 1859, *L. Riedel s.n.* (lectotype, designated here, LE-00007069!; isoelectotypes, F-0064729F!, K-000343087!, LE-00007065!, LE-00007066!, LE-00007067!, LE-00007068!, LE-00007070!, P-00163071!, P-00163072!). [Species group A].

Habitat and distribution. *Myrcia gigantea* is found in the Atlantic rainforest of Brazil (Bahia, also reported from Rio de Janeiro) at altitudes of ca. 0–70 m.

IUCN Red List category. *Myrcia gigantea* is known to us only from the type; specimens authoritatively identified from the NYBG virtual herbarium (Thiers, 2015) produce an EOO of ca. 200 km² from a biome that is under intense environmental threat. *Myrcia gigantea* is assessed as Endangered (EN) according to IUCN criteria (2014).

Notes. *Myrcia gigantea* has particularly large, subsessile leaves (to 30 cm) with cordate bases and a raised midvein. The inflorescence is terminal with a short, red pubescence and is whorled and subtended by large foliaceous bracts. This species has an affinity with species such as *M. eumecephylla*, *M. hexasticha*, *M. neovorticillaris*, and *M. insularis*. Sobral et al. (2015) also reported this species from the state of Rio de Janeiro.

39. *Myrcia gilsoniana* G. M. Barroso & Peixoto, Acta Bot. Brasil. 4(2): 7. 1990. TYPE: [Brazil.] Espírito Santo: Linhares, Reserva Florestal da CVRD, Rio Barra Seca, 8 Nov. 1972, J. Spada 57 (holotype, RB-00542147!). [No species group assignment].

Habitat and distribution. *Myrcia gilsoniana* is endemic to the Reserva Vale do Rio Doce, Brazil (Espírito Santo), and is found at altitudes of ca. 10–30 m.

IUCN Red List category. *Myrcia gilsoniana* is known to us only from the type specimen, suggesting an extremely restricted population from a well-collected area in a biome under extreme environmental threat. *Myrcia gilsoniana* is assessed as Critically Endangered (CR) according to IUCN criteria (2014).

Notes. The protologue of *Myrcia gilsoniana* suggests an unqualified affinity with *M. stictophylla* (O. Berg) N. Silveira, a morphologically very similar species. About six collections available online (speciesLink, 2015) indicate a species with somewhat thickened leaves and a thick midvein that decreases steadily in width toward the leaf tip.

40. *Myrcia graciliflora* Sagot, Ann. Sci. Nat., Bot., VI, 20: 185. 1885. *Eugenia schaueriana* Miq., Linnaea 22: 174. 1849. *Myrciaria schaueriana* (Miq.) O. Berg, Linnaea 27: 323. 1856. *Aulomyrcia schaueriana* (Miq.) Amshoff, Recueil Trav. Bot. Néerl. 39: 155. 1942. TYPE: Suriname. Pará, Feb.–Apr. 1844, A. Kappler 1429 (holotype, U-0005115!; isotypes, C-10015846P!, P-00549012!, S-079893!). [No species group assignment].

Habitat and distribution. *Myrcia graciliflora* occurs in the forests of northern South America, from French Guiana, Guyana, Suriname, and Brazil and has been collected at altitudes from 20 to 300 m.

IUCN Red List category. *Myrcia graciliflora* is a widespread species known to us from 24 collections from 19 localities and is very well represented in online herbaria (EOO > 2 million km²). *Myrcia graciliflora* is of Least Concern (LC) according to IUCN criteria (2014).

Notes. *Myrcia graciliflora* is distinguished by its relatively large, acuminate leaves (to 15 cm), often with evident glands. The inflorescence is a lateral or terminal, cymose panicle, or a mixture of the two, with a peduncle so short the impression can be of fasciculate racemes. The branches of the inflorescence can vary in length but are usually slender. The calyx is completely fused in the bud but once split into four calyx lobes, the splits do not extend into the staminal ring. McVaugh (1969) reported this to be a little known species; since that work, it is now also known from Brazil. The affinities of this species are unknown.

Selected specimens. BRAZIL. Acre: Rio Branco, Estrada Rio Branco/Quixada, Km. 11, Nelson 733 (K). Roraima: Vitoria, Serrinha, Rio Mucajai, Prance 4188 (K). FRENCH GUIANA. Crique Calebasse, Bassin de l'Approuague, Oldeman 101 (K). GUYANA. Barima River, 12 mi. E of Arakaka, at Tenap, Barima-Waini, Pipoly 8107 (K). SURINAME. Pará, Mapane, Bosbeheer 9835 (K).

41. *Myrcia grandis* McVaugh, Mem. New York Bot. Gard. 18: 114. 1969. TYPE: Venezuela. Amazonas: Rio Siapa, Casiquiare, 9 Feb. 1954, B. Maguire 37617 (holotype, MICH-1109512!; isotypes, NY-00405440!, VEN-76131!). [Species group C].

Habitat and distribution. *Myrcia grandis* is known from Igapó forest along rivers and in flooded areas from Panama to northern Brazil at altitudes of ca. 100–130 m.

IUCN Red List category. *Myrcia grandis* is a widespread species known to us from 16 collections from 16 localities and is very well represented in online herbaria (EOO > 800,000 km²). The species is assessed as Least Concern (LC) according to IUCN criteria (2014).

Notes. *Myrcia grandis* has distinctive coriaceous leaves, which are rounded at the base and apiculate with a raised midvein. Authoritatively identified specimens cited on TROPICOS® (2015) voucher the occurrence of this species in Colombia and Panama. McVaugh (1969) commented on the 4-merous flowers, anomalous in *Myrcia*, and large free

calyx lobes permanently united at the base that excluded it from *Marlierea*.

Selected specimens. BRAZIL. **Amazonas:** along Cuiuni Rivers (blackwater), *Acevedo-Rodríguez* 8521 (K). **Pará:** Oriximina, Area de Mineracao, Rio Norte, Lago da Batata, 9 km da vila residencial, *Cid Ferreira* 9593 (K). **Roraima:** Caracarai, rd. Manaus–Caracarai, Km. 592 a 609, *dos Santos* 735 (K). GUYANA. Upper Takutu–Upper Essequibo, Kassikaityu River, 0–4 km W of landing at terminus of trail from Kuyuwini River, *Clarke* 4768 (K). VENEZUELA. **Amazonas:** Atabapo, Cabecera del Cano Cotua, Cerro Yapacans, *Huber* 1530 (K).

42. *Myrcia guildingiana* (Griseb.) E. Lucas & C. E. Wilson, comb. nov. Basionym: *Psidium guildingianum* Griseb., Fl. Brit. W. I., 242. 1860. *Marlierea guildingiana* (Griseb.) Krug & Urb., Bot. Jahrb. Syst. 19: 591. 1895. *Plinia guildingiana* (Griseb.) Urb., Ark. Bot. 21A(5): 23. 1927. TYPE: St. Vincent. Wallilabo valley, s.d., *H. H. Guilding s.n.* (lectotype, designated here, K-000330423!; isoelectotypes, GOET-007308!, K-000330424!). [Species group B].

Habitat and distribution. *Myrcia guildingiana* is reported from Venezuela, the Lesser Antilles, Guyana, and French Guiana at altitudes of ca. 120–320 m.

IUCN Red List category. *Myrcia guildingiana* is a widespread species known to us from 14 collections from 14 localities and is well represented in online herbaria (EOO > 170,000 km²). *Myrcia guildingiana* is assessed as Least Concern (LC) according to IUCN criteria (2014).

Notes. *Myrcia guildingiana* has short, lateral inflorescences consistent with McVaugh's (1958) assignment to his *Marlierea* sect. *Myrciopsis*. Stafleu and Cowan (1976–1988) reported Guilding's top set of specimens to be deposited at GOET; however, the GOET collection consists of loose leaves and flowers only; on this basis we lectotypify the most representative sheet, housed at Kew.

Selected specimens. FRENCH GUIANA. Meamu Creek, *Redden* 4993 (K). GRENADA. Grand Etang, *Proctor* 17030 (IJ). GUYANA. **Cuyuni-Mazaruni:** Bird Island, R. B. Essequibo, opposite Bartica, *Forest Department of British Guiana* 2593 (K). ST. LUCIA. Castries, Castries Water Works Reserve, Piton Flore, *Beard* 479 (K). ST. VINCENT. Forest N side of Mt. St. Andrew, *Smith* 1735 (K). TRINIDAD AND TOBAGO. **Ward of Tobago:** Roxborough, Parlaturier Rd., *Sandwith* 1769 (K).

43. *Myrcia hexasticha* Kiaersk., Enum. Myrt. Bras., 72. 1893. TYPE: [Brazil.] Rio de Janeiro, Jan. 1881, *A. F. M. Glaziou* 11975 (holotype, C-

10015856!; isotypes, G-00439824!, K-000343357!, LE-00007167!, P-00161247!, R-000009042!). [Species group A].

Habitat and distribution. *Myrcia hexasticha* is found in the Atlantic forests of southeastern Brazil (Rio de Janeiro to Paraná) at altitudes of ca. 0–200 m.

IUCN Red List category. *Myrcia hexasticha* has been assessed as Endangered (EN) by Martinelli and Moraes (2013) according to IUCN criteria (2014).

Notes. *Myrcia hexasticha* is defined by its ternate leaf arrangement; it has raised midveins and whorled, terminal inflorescences subtended by small, leafy bracts. The species has free calyx lobes but otherwise resembles *M. neoverticillaris*; it also resembles *M. insularis*, which differs in having decussate leaves.

Selected specimens. BRAZIL. **Paraná:** Pontal do Paraná, Shangri La, *Lucas* 194 (K). **Rio de Janeiro:** Silva Jardim, *Pessoa* 1217 (K).

44. *Myrcia holstii* E. Lucas & C. E. Wilson, nom. nov. Replaced name: *Marlierea subcordata* B. Holst, Selbyana 23: 150. 2002, non *Myrcia subcordata* DC., Prodr. [de Candolle] 3: 253. 1828. TYPE: Venezuela Amazonas: Rio Baria, entre la boca de al Laguna Turuvi y la Laguna Laja Gajaio, *B. Stergios* 16348 (holotype, PORT-61500!; isotypes, MO not seen, US-00822717!, VEN-286066!). [No species group assignment].

Habitat and distribution. *Myrcia holstii* is known to us only from the type and paratype from low forests along periodically flooded riverbanks in Amazonas State, Venezuela, at an altitude of ca. 80 m.

IUCN Red List category. *Myrcia holstii* is known from only the type locality and one other locale, cited in the protologue. The locations are ca. 270 km apart, hence a very restricted EOO. The collection points do not occur in protected areas and so are vulnerable to sudden or stochastic change. *Myrcia holstii* is assessed as Vulnerable (VU D2) according to IUCN criteria (2014).

Notes. Holst (2002) associates *Myrcia holstii* with *M. argentigemma* and *M. mcvaughii* but does not qualify this. *Myrcia holstii* is unique in its subcordate leaf bases, plane abaxial midveins, and lustrous, dry leaf texture. This epithet acknowledges the significant impact of the works of Bruce K. Holst on current Myrtaceae systematics.

45. *Myrcia inaequiloba* (DC.) Lemée in Fl. Guyane Franç. 3: 150. 1954. Basionym: *Eugenia inaequiloba* DC., Prodr. [de Candolle] 3: 282. 1828. *Aulomyrcia inaequiloba* (DC.) Amshoff, Recueil Trav. Bot. Néerl. 42: 7. 1950. TYPE: French Guiana. Cayenne: s.d., collector unknown, s.n. (lectotype, designated by McVaugh [1969: 97], G-00222421!; isolectotypes, G-DC!, L not seen). [Species group C].

Myrcia lucida McVaugh, Mem. New York Bot. Gard. 18: 100. 1969, syn. nov. *Myrcia laevis* O. Berg, Linnaea 31: 252. 1862, nom. illeg. TYPE: Venezuela. Amazonas: Rio Guainia above the mouth of the Casiquiari, 1854, R. Spruce 3502 (holotype, BR-0000005280339!; isotypes, BM-000953607!, C-10015864!, CAS-0003583!, E-00394780!, F-0065509F!, G-00222238!, K-000330179!, K-000343745!, LE-00007185!, MICH-1109507!, NY-00405447!, P-00161223!, W-18890013687!).

Myrcia lucida var. *attenuata* McVaugh, Mem. New York Bot. Gard. 18: 100. 1969, syn. nov. TYPE: Brazil. Amazonas: Porto Curucuhy, Rio Negro, 1945, R. de Lemos Fróes 21103 (holotype, MICH-1109503!; isotypes, K-000343746!, NY-00405448!).

Habitat and distribution. *Myrcia inaequiloba* is common from scrubby riversides or igapó, and from sandy soils; this species has been collected in the Amazonian forests from Panama to northern Brazil at altitudes of ca. 0–900 m. A single authoritatively named specimen of *M. lucida* collected in Bolivia (TROPICOS®, 2015) marks the species occurrence there.

IUCN Red List category. *Myrcia inaequiloba* is an extremely widespread species and is assessed as Least Concern (LC) according to IUCN criteria (2014).

Notes. *Myrcia inaequiloba* is an extremely variable species (McVaugh, 1969) in which the calyx lobes can vary in size and shape. The species has an impressed midvein, pubescent inflorescence, and four internally pubescent, unequal calyx lobes. McVaugh (1969) noted the similarity of this species to *M. umbraticola* in the context of the arbitrary division of closely related species into different genera according to their calyces. We are grateful to Bruce Holst (pers. comm.) who focused his attention on the morphological similarity between this species and *M. lucida*. Specimens previously attributed to *M. lucida* have particularly subcordate leaf bases and lustrous leaves, whilst the type specimen of *M. lucida* var. *attenuata* has narrower leaves with longer acumen to 2.5 cm and unusually long inflorescences to 12 cm. However, all these variable characteristics fit within the circumscription

of *M. inaequiloba* followed here, and distributions are sympatric. We interpret *M. lucida* var. *attenuata* as an attenuate local morphological extreme and synonymize both varieties of *M. lucida* under *M. inaequiloba*.

Selected specimens. BOLIVIA. **Santa Cruz:** Velasco, Parque Nacional Noel Kempff Mercado, laguna Bella Vista, R. Guillén 3817 (SEL not seen). BRAZIL. **Amazonas:** Barcelos, Margens do Rio Araca proximo Rio Januari, Cordeiro 144 (K). **Mato Grosso:** Barra do Garças, above Agua Quente, Ratter 3275 (K). **Roraima:** Rio Murupu, 28 km NW of Boa Vista, rd. to Taiano, Prance 9130 (K, U). ECUADOR. **Morona-Santiago:** Centro Shuar Yukutais, W of Pedro Kunkumas' house and S of school, Bennett 4145 (NY). FRENCH GUIANA. Piste de Saint-Elie, Sabatier 877 (CAY). GUYANA. **Potaro-Siparuni:** Kato, Potaro-Siparuni, Hahn 5610 (K). **Upper Takutu–Upper Essequibo:** Isherton, basin of Rupunini River, Smith 2479 (K). PERU **Loreto:** Maynas, Rio Yuvinetto affluent du Putumayo, territoire des indiens Secoya, Barrier 654 (K). SURINAME. **Brokopondo:** Van Bloommesteijn Lake, island E of the lake, along the banks, Bhikhi 947 (K). **Pará:** Jodensavanne–Mapanekreek area, camp 8, Elburg 9398 (K). VENEZUELA. **Bolívar:** Cedenó, vic. of Panare village of Corozal, 6 km from Maniapure, Boom 6639 (K).

46. *Myrcia induta* McVaugh, Mem. New York Bot. Gard. 18: 99. 1969. TYPE: Venezuela. Amazonas: Rio Ventuari, Serrania Paru, Rio Paru, Cano Asisa, 7 Feb. 1951, R. S. Cowan 31348 (holotype, MICH-1109509!; isotypes, F-0065500F!, NY-00564000!, VEN-75662!). [Species group B].

Habitat and distribution. *Myrcia induta* is known from mountainous ridges in Venezuela (Amazonas) at an altitude of ca. 2000 m.

IUCN Red List category. *Myrcia induta* is known only from the type collection from a relatively poorly known and collected area; we could find no additional information regarding the type locality. *Myrcia induta* is assessed as Data Deficient (DD) according to IUCN criteria (2014).

Notes. *Myrcia induta* resembles *M. caudata*; however, the former species is distinguished by its appressed, gray hairs. The inflorescence is less than 2 cm with two to five (to 10) flowers. Although the calyx lobes are free, the short inflorescence and acuminate leaves suggest McVaugh's *Marlierea* sect. *Myrciopsis*.

47. *Myrcia insignis* (McVaugh) E. Lucas & C. E. Wilson, comb. nov. Basionym: *Marlierea insignis* McVaugh, Fieldiana, Bot. 29: 176. 1956. TYPE: Colombia. Amazonas: Vaupés, 21 June 1951, R. E. Schultes 12766 (holotype, US-

00117788!; isotypes, BM-000798860!, GH-00443660!, LE!, MICH-1109603!, US-00997540!). [No species group assignment].

Habitat and distribution. *Myrcia insignis* is known from southern Venezuela and Colombia to northern Peru at an altitude of ca. 250 m.

IUCN Red List category. *Myrcia insignis* is known to us only from the type; three further authoritatively named collections are available online (TROPICOS®, 2015). Based on the resulting distribution we calculate an EOO > 170,000 km². This species is of Least Concern (LC) according to IUCN criteria (2014).

Notes. *Myrcia insignis* is remarkable in its large, shortly acuminate, rounded leaves with open venation; it has globose fruits covered in golden hairs arranged on short lateral inflorescences.

48. *Myrcia insularis* Gardner, London J. Bot. 1: 536. 1842. *Aulomyrcia insularis* (Gardner) O. Berg in C. F. P. von Martius & auct. suc. (eds.), Fl. Bras. 14: 98. 1857. TYPE: [Brazil.] Rio de Janeiro: Ilha do Governador, 1836, *G. Gardner 202* (lectotype, designated here [likely holotype], BM-000953612!; isolectotypes, K-000343449!, K-000343450!, K-000343451!, P-00161230!). [Species group A].

Aulomyrcia insularis var. *punctata* O. Berg in C. F. P. von Martius & auct. suc. (eds.), Fl. Bras. 14: 98. 1857. TYPE: [Brazil. Pernambuco], 1838, *G. Gardner 1016* (lectotype, designated here, P-00163115!; isolectotypes, BM-000953611!, E-00504681!, F-0064726!, F-0064730F!, G-00222233!, GH-00071103!, K-000018494!, K-000018495!, K-000342595!, NY-00386669!, P-00163113!, P-00163114!, US-00117779!).

Habitat and distribution. *Myrcia insularis* is endemic to restinga and tabuleiro vegetation of the Atlantic forests in southeastern Brazil (Bahia to Rio de Janeiro). It has been collected from altitudes of 0–100 m.

IUCN Red List category. *Myrcia insularis* is known to us from 11 collections from 10 independent localities (EOO of ca. 250,000 km²); approximately half of these are from pre-1900. This species occurs only in the most littoral part of the Atlantic forest. Although the EOO is large enough, this falls short of the IUCN criteria of threat. However, these forests are extremely pressured by sprawling residential development (Google Inc., 2015). The species is assessed as Near Threatened (NT) according to IUCN criteria (2014).

Notes. Gardner's original material of *Myrcia insularis* was collected in Rio de Janeiro from Ilha do Governador. *Gardner 202* (BM) is the only duplicate to bear this locality, and we take this to be the type. This species has decussate leaves, a flat or slightly raised midvein, free calyx lobes, and terminal, whorled, glabrous inflorescences subtended by large bracts. *Myrcia insularis* is similar to *M. hexasticha*, but we maintain the distinction between the two species as the latter has ternate leaves; both are similar to *M. obversa*, which has much larger open flowers (ca. 5 mm vs. ca. 1.5 mm in *M. insularis*) and a denser indument.

Selected specimens. BRAZIL. **Bahia:** Ilhéus, Castelo Novo, *Riedel 514* (K). **Espírito Santo:** Linhares, Res. Nat. CVRD, *Folli 4138* (K). **Rio de Janeiro:** Guanabara, Floresta de Tijuca, *Strang 543* (K).

49. *Myrcia karuaiensis* (Steyerm.) E. Lucas & C. E. Wilson, comb. nov. Basionym: *Aulomyrcia karuaiensis* Steyerm., Fieldiana, Bot. 28: 1005. 1957. *Marlierea karuaiensis* (Steyerm.) McVaugh, Mem. New York Bot. Gard. 10: 85. 1958. TYPE: [Venezuela.] Bolívar: Salto de Iraba-naima waterfall, Ptari-tepui, 28 Nov. 1944, *J. A. Steyermark 60702* (holotype, F not seen; isotypes, U-0005120!, VEN-37433!). [Species group B].

Habitat and distribution. *Myrcia karuaiensis* has been collected from Venezuela to Guyana from altitudes of 200–1000 m.

IUCN Red List category. *Myrcia karuaiensis* is known to us from five collections from four localities but is well represented in online herbaria, giving an EOO > 225,000 km². This species is relatively well and recently collected from multiple, disjunct localities, some in national parks (WDPA, 2015). The species is assessed as Least Concern (LC) according to IUCN criteria (2014).

Notes. In its short, few-flowered inflorescences with sessile distal flowers, *Myrcia karuaiensis* resembles others from *Marlierea* sect. *Myrciopsis*; McVaugh (1958) placed this species here.

Selected specimen. GUYANA. **Cuyuni-Mazaruni:** Pakaraima Mtns., Karowrieng River at Maipuri Falls, *Hoffman 2961* (K).

50. *Myrcia kylistophylla* B. Holst, Selbyana 23: 154. 2002. TYPE: Venezuela. Bolívar: Cedeno, Sierra de Maigualida, 18 Nov. 1988, *O. Huber 12794* (holotype, MYF not seen; isotype, SEL-002942!). [Species group B].

Habitat and distribution. *Myrcia kylistophylla* has been found on rocky outcrops and stream sides as well as tepui summits in Venezuela from altitudes of 1900–2100 m.

IUCN Red List category. *Myrcia kylistophylla* is known only from the three collections cited in the protologue; these give an EOO of ca. 500 km², falling into the IUCN endangered category. While the localities do not fall in protected areas, threats to the summits of tepuis are currently low. The low number of localities from which *M. kylistophylla* is known, however, means that if environmental threat increased, this species would be under pressure. We assign a category of Vulnerable (VU) according to IUCN criteria (2014).

Notes. *Myrcia kylistophylla* is distinct in its strongly revolute leaves, open venation, reduced axillary inflorescences, and dense indumentum on leaves abaxially as well as on pedicels and hypanthium. Holst (2002) suggested an affinity with *M. gentryi* (from which it is distinguished by its revolute leaf margins) and other species associated here with *Marlierea* sect. *Myrciopsis* (McVaugh, 1958). A shared character among these species is the reduced nature of the inflorescence. Additional specimens are cited by Holst (2002).

51. *Myrcia liesneri* B. Holst, Selbyana 23: 154. 2002. TYPE: Venezuela. Amazonas: Rio Negro, on hills 1.5 km S of Cerro de la Neblina Base Camp, on Rio Mawarinuma, 4 Dec. 1984, R. Liesner 17494 (holotype, ASU not seen; isotypes, MO-2112609!, SEL-002943!, VEN-332431!). [Species group A].

Habitat and distribution. *Myrcia liesneri* is known from hillsides; it has been collected from Venezuelan Amazonas, at altitudes of 140–400 m.

IUCN Red List category. *Myrcia liesneri* collections are known from only the type locality and one other locale, cited in the protologue. The locations are ca. 270 km apart, hence a very restricted EOO. The collection points do not occur in any protected areas and are vulnerable to sudden stochastic events; therefore, *Myrcia liesneri* is assessed as Vulnerable (VU D2) according to IUCN criteria (2014).

Notes. *Myrcia liesneri* has a raised midvein and terminal, paired inflorescences, suggesting an affinity with similar species from the littoral forests of eastern Brazil. Leaves are subsessile and acuminate. Holst (2002) suggested an unqualified affinity to *M. revolutifolia* McVaugh from which this species is

distinguished by having more slender (2.5–3.5 times as long as wide vs. 1.5 times as long as wide) and acuminate (vs. rounded) leaves and minutely puberulent (vs. glabrous) flowers.

52. *Myrcia ligustrina* (McVaugh) E. Lucas & C. E. Wilson, comb. nov. Basionym: *Marlierea ligustrina* McVaugh, Mem. New York Bot. Gard. 10: 86. 1958. TYPE: Venezuela. Amazonas: Cerro Yapacana, Rio Orinoco, 3 Jan. 1951, B. Maguire 30738 (holotype, MICH-1109601!; isotypes, NY-00564003!, US-00117789!, VEN-41605!). [No species group assignment].

Habitat and distribution. Collections of *Myrcia ligustrina* are associated with rivers on mid- to high-altitude rocky savanna from Venezuela to Guyana, from altitudes of 550–1800 m.

IUCN Red List category. *Myrcia ligustrina* is known from four collections cited in the protologue that give an EOO of ca. 73,500 km². The relatively few, unprotected locations from which the specimens have been collected suggest a fragmented population; however, the type locality is protected in the Parque Nacional Cerro Yapacana. The species is assessed as Least Concern (LC) according to IUCN criteria (2014).

Notes. *Myrcia ligustrina* is a species distinguished by its coriaceous leaves with raised midveins. Inflorescences are terminal and subterminal bunches of cymose panicles with flattened rachises; calyx lobes are very unequal with one often much larger than the others. McVaugh (1958) suggested a resemblance to *M. neomontana* and discusses differences in detail such as the smaller leaves with cuneate leaf bases in *M. ligustrina*.

53. *Myrcia littoralis* DC., Prodr. [de Candolle] 3: 249. 1828. TYPE: [Brazil.] in arboretis maritimis prov. Bahiensis Brasiliae, C. F. P. Martius s.n. (lectotype, designated here, M-0136953!; isotype, G-DC!). [Species group C].

Habitat and distribution. *Myrcia littoralis* is found in northeastern Brazil from Pernambuco to Bahia, in restinga vegetation at altitudes lower than 100 m.

IUCN Red List category. *Myrcia littoralis* is a common species of the Bahian restinga. Approximately 70 authoritatively named specimens are cited online (Sobral et al., 2015; speciesLink, 2015) confirming its presence in Pernambuco and Espírito

Santo and providing an EOO > 80,000 km². *Myrcia littoralis* is assessed as Least Concern (LC) according to IUCN criteria (2014).

Notes. *Myrcia littoralis* is reminiscent, in leaf and inflorescence shape, of *M. exploratoris* and *M. coelosepala*. It differs from these latter species in its coastal distribution in restinga vegetation, its leaves that are smaller and papery (compared to those of *M. exploratoris*), and its white, silky trichomes on the inflorescences and hypanthia (vs. trichomes absent in *M. coelosepala*). *Myrcia littoralis* is a large (ca. 25 m) tree in *Myrcia* sect. *Aulomyrcia*.

Selected specimen. BRAZIL. **Bahia:** a direita de estrada principal, ca. 2 km a sul de Olivença, *Lucas 1000* (K).

54. *Myrcia lituatinervia* (O. Berg) E. Lucas & C. E. Wilson, comb. nov. Basionym: *Myrciaria lituatinervia* O. Berg, *Linnaea* 27: 322. 1856. *Marlierea lituatinervia* (O. Berg) McVaugh, *Mem. New York Bot. Gard.* 18: 65. 1969. TYPE: British Guiana. s.d., *R. Schomburgk 874* (neotype, designated by McVaugh [1969: 65], K-000261026!). [Species group B].

Habitat and distribution. *Myrcia lituatinervia* is found among rocks, from southeast Venezuela to Guyana from altitudes of ca. 500 m; the species has also been reported from Brazil.

IUCN Red List category. *Myrcia lituatinervia* is known only from the type collection and from a poorly known and collected area. This species appears to have an extremely restricted EOO and is assessed as Vulnerable (VU D2) according to IUCN criteria (2014).

Notes. *Myrcia lituatinervia* has thick, apparently fleshy pedicels and winged branchlets that “are the mark of sect. *Myrciopsis*” (McVaugh, 1969: 65). McVaugh (1969) noted a strong similarity in inflorescence and leaf disposition between *M. karuaiensis* and *M. lituatinervia*, citing a distinction based on the subcordate leaf bases in *M. lituatinervia*. Sobral et al. (2015) did not cite this species in Brazil; however, the K collection contains specimens from the Distrito Federal that match the type surprisingly well. These two specimens were the basis for the (likely mis-) naming of other specimens from Bahia and Espírito Santo as this species. This may be perpetuated in other herbaria; further study of the Distrito Federal material is required.

Selected specimen. BRAZIL. **Distrito Federal:** Brasília, Riacho Fundo, near Airport Rd., *Mendonça 144* (K).

55. *Myrcia macrocarpa* DC., *Prodr.* [de Candolle] 3: 249. 1828. *Aulomyrcia macrocarpa* (DC.) O. Berg, *Linnaea* 27: 41. 1855. TYPE: Brazil. [São Paulo:] Sebastianopolis, monte Formoso, s.d., *C. F. P. Martius s.n.* (holotype, M-0136950!; isotype, US-19816!). [No species group assignment].

Habitat and distribution. *Myrcia macrocarpa* is endemic to the mountains of Rio de Janeiro and Espírito Santo, Brazil; altitudes are not precisely known.

IUCN Red List category. Doubts regarding the specific delimitation of *Myrcia macrocarpa* require resolution before a category of threat can be assigned. The species is assessed as Data Deficient (DD) according to IUCN criteria (2014).

Notes. The type specimen of *Myrcia macrocarpa* is of a plant with a raised midvein and terminal inflorescence that otherwise resembles *M. pyrifolia*.

56. *Myrcia magna* D. Legrand, *Atas Simp. Biota Amazonica* 4: 150. 1967, replacement name. Replaced name: *Aulomyrcia grandifolia* O. Berg in C. F. P. von Martius & auct. suc. (eds.), *Fl. Bras.* 14: 97. 1857, non *Myrcia grandifolia* Cambess. in A. F. C. de Saint-Hilaire, *Fl. Bras. Merid.* 2: 298. 1832. TYPE: [Brazil.] Amazonas: Barra do Rio Negro, Oct. 1851, *R. Spruce s.n.* (holotype, M-0136853!; isotypes, F-0064722F!, G-00222416!, G-00222417!, K-000343116!, K-000343117!, K-000343961!, LE-00007074!, NY-00386668!, P-00161260!). [Species group A].

Habitat and distribution. *Myrcia magna* is known from lowland, terra firme, Amazon forest in Amazonas, Roraima, and Rondônia, at an altitude of ca. 40 m.

IUCN Red List category. *Myrcia magna* is known from ca. 12 collections available online (SpeciesLink, 2015); its EOO is > 600,000 km² but no collections are from protected areas. Lowland Amazon forest is under pressure from anthropological expansion, and, if the relatively low number of gatherings indicate a small population, *M. magna* could be at risk in the future. Without more information, however, *M. magna* is here assigned a threat category of Least Concern (LC) according to IUCN criteria (2014).

Notes. *Myrcia magna* has a flat to raised midvein; a terminal to subterminal pair of long (to

ca. 18 cm), lightly lanate panicles with long secondary axes; asymmetrically arranged, shortly stalked flowers; deciduous bracts; and internally glabrous calyx lobes. The species is related to those with similar gross morphology from the littoral forests of eastern Brazil, a group poorly represented in the Amazon where it may be related to *M. liesneri*.

57. *Myrcia maguirei* (McVaugh) E. Lucas & C. E. Wilson, comb. nov. Basionym: *Marlierea maguirei* McVaugh, Mem. New York Bot. Gard. 10: 87. 1958. TYPE: Venezuela. Amazonas: Cerro Yutaje, Rio Manapiare, 9 Feb. 1953, *B. Maguire 35114* (holotype, MICH-1109600!; isotype, VEN-41595!). [Species group B].

Habitat and distribution. *Myrcia maguirei* has been collected from stream beds in Venezuela from an altitude of ca. 1400 m.

IUCN Red List category. *Myrcia maguirei* is known to us only from the type, although seven further authoritatively identified collections are cited on TROPICOS® (2015). These give an EOO of ca. 1500 km². Three collections of this species are within the Orinoco-Casiquiare Biosphere Reserve (WDPA, 2015). This species is assessed as Vulnerable (VU) according to IUCN criteria (2014).

Notes. McVaugh (1958) originally assigned *Myrcia maguirei* to *Marlierea* sect. *Myrciopsis*; the rheophytic habit of the species is suggested by the plant's reduced paniculate inflorescences with rounded rachises; decussate, elliptic leaves with channeled midveins; rounded internodes; and four calyx lobes persistent on a globose fruit. The whole plant is glabrous.

58. *Myrcia mathewsiana* (O. Berg) McVaugh, Publ. Field Mus. Nat. Hist., Bot. 13(4): 646. 1958. Basionym: *Aulomyrcia mathewsiana* O. Berg, Linnaea 27: 45. 1855. TYPE: Peru. Moyobamba: Chachopayos, s.d., *A. Mathews 1453* (lectotype, designated here, W-0032470!; isotypes, BM-000953648!, BM-000953649!, F-0064740F!, K-000261042!, K-000261043!, K-000261044!, K-000330184!, K-000330185!, K-000330186!, MICH-1109826!, W-0032469!). [Species group C].

Habitat and distribution. The distribution of *Myrcia mathewsiana* extends from Peru to Bolivia (in Bolivia, by WCSP, 2015), at altitudes of 800–900 m.

IUCN Red List category. *Myrcia mathewsiana* is known to us only from the type; we cannot find evidence that the species occurs in Bolivia (WCSP, 2015). Its specific delimitation requires resolution before a category of threat can be assigned. The species is assessed as Data Deficient (DD) according to IUCN criteria (2014).

Notes. *Myrcia mathewsiana* has a puberulent hypanthium and shares many characters with *M. pubiflora*. Leaf bases tend to be cordate; apart from this, it is difficult to say how these species differ and to delimit these species and several others of the decorticans complex (Kawasaki & Holst, 1994).

59. *Myrcia mcvaughii* (B. Holst) E. Lucas & C. E. Wilson, comb. nov. *Marlierea mcvaughii* B. Holst, Selbyana 23: 147. 2002. TYPE: Venezuela. Amazonas: Rio Negro, Cano Darigua, 11 km S of San Carlos de Rio Negro, *H. Clark 8302* (holotype, MO not seen; isotypes, INPA not seen, NY-00564087!, SEL-002445!, VEN-286776!). [Species group B].

Habitat and distribution. *Myrcia mcvaughii* has been collected from the Rio Negro basin on white sand shrubby savanna in Colombia, southern Venezuela, and Brazil at altitudes of ca. 120 m.

IUCN Red List category. The nine paratypes of *Myrcia mcvaughii* cited in the protologue give an EOO for this species of ca. 65,000 km², falling within the relatively unthreatened (EOE, 2015) Negro-Branco moist forest ecoregion (WWF, 2015). *Myrcia mcvaughii* is assessed as Least Concern (LC) according to IUCN criteria (2014).

Notes. *Myrcia mcvaughii* has somewhat cymose inflorescences with flattened rachises and leaf venation reminiscent of *Marlierea* sect. *Myrciopsis*. The calyx is fused in the bud, which is reminiscent of *Calyptranthes*. The flowers tear into two to three or four lobes, giving the uneven appearance common in *Myrcia* sect. *Aulomyrcia*, while in others on the same collection, there is a calyptra. This species emerges within the clade that corresponds to *Myrcia* sect. *Aulomyrcia* in the phylogenetic analysis of Santos (2014). Holst (2002) discusses this species in the context of perplexing intermediates between *Calyptranthes* and *Marlierea*.

Selected specimen. BRAZIL. Amazonas: São Gabriel da Cachoeira, Rio Icana, Jauacana, *Rodrigues 10822* (K).

60. *Myrcia micropetala* (Mart.) Nied., Nat. Pflanzenfam. 3(7): 76. 1893. Basionym: *Eugenia*

micropetala Mart., Flora 24 (2 Beibl.): 108. 1841. *Aulomyrcia micropetala* (Mart.) O. Berg, Linnaea 27: 56. 1855. TYPE: Brazil. [Bahia:] Ilheos [Ilheus], s.d., *B. Luschnath* 116 [herb. Martius 685] (lectotype, designated here, BR-0000005269426!; isoelectotypes, BR-0000005280353!, BR-0000005280414!, BR-0000005280681!, BR-0000005280742!, BR-0000005281015!, BR-0000005281077!, F-0065228F!, G00222241!, HAL-0082957!, HAL-089748!, JE-00004847!, JE-00004848!, K-000018502!, K-000018503!, K-000018504!, LE [6]!, M-0136936M!, M-0136937!, MICH-1109673!, NY-00404955, P-00163096!, P-00163097!, S-052465!, U-0005124!, W-0032472!). [Species group C].

Habitat and distribution. *Myrcia micropetala* is known from the ombrophilous forests of Bahia and (probably) Espírito Santo from an altitude of ca. 500 m.

IUCN Red List category. *Myrcia micropetala* is known to us from five collections with a further 10 available online (speciesLink, 2015), giving an EOO > 8000 km². The species has been found exclusively in the coastal forests of southern Bahia, a habitat under extreme pressure and threat from habitat removal and urban development. Thus, our assessment is Vulnerable (VU) according to IUCN criteria (2014).

Notes. Plants of *Myrcia micropetala* have large, somewhat bullate leaves, a conspicuously raised midvein, terminal inflorescences, large, persistent inflorescence bracts, and dense indumentum on leaves and inflorescences. The inflorescence of *M. micropetala* is typical for *Myrcia* sect. *Aulomyrcia*; however, the calyx lobes of this species are relatively small (no more than 1.5 mm) and unusually reflexed. This species is reminiscent of *M. racemosa* in its small, pubescent flowers, leaves drying green, and venation.

Selected specimen. BRAZIL. **Bahia:** Una, Res. Biol. Mico-Leão (IBAMA), entrada no Km. 46 da Rod. BA-001 Ilheus/Una, *Jardim* 1076 (K).

61. *Myrcia minutiflora* Sagot, Ann. Sci. Nat., Bot., VI, 20: 185. 1885. *Aulomyrcia minutiflora* (Sagot) Amshoff, Bull. Torrey Bot. Club 75: 532. 1948. TYPE: [French Guiana.] Maroni, 1862, *M. Melinon s.n.* (holotype, P-00163092!; isotypes, F-0065529F!, NY-00405453!, P-

00163093!, P-00163094!, P-00163095!, US-00117761!). [Species group B].

Habitat and distribution. *Myrcia minutiflora* has been collected from dense rainforest in Guyana, Suriname, and the Amazonian states of Brazil to northern Mato Grosso, from altitudes of 100–800 m.

IUCN Red List category. *Myrcia minutiflora* is known to us from ca. 40 collections from more than 30 localities, with an EOO of ca. 3 million km². This species is assessed as of Least Concern (LC) according to IUCN criteria (2014).

Notes. *Myrcia minutiflora* is a species distinctive in its venation that tends to be more open than usual in *Myrcia* s.l.; there is a deeply looping intra-marginal vein running to 5 mm from the edge of the leaf. The blade venation is deeply impressed adaxially, and the leaves are long-acuminate. Inflorescences are short, lateral, and in loose cymes, and fruits are on short stalks. Holst (2002) suggested an unqualified affinity with *M. bolivarensis* and provided additional specimen citations.

Selected specimens. BRAZIL. **Acre:** Cruzeiro do Sul, Estr. Alemanha, forest on terra firme, *Prance* 11853 (K). **Amazonas:** Manaus, Res. Flor. Ducke, Manaus–Itacoatiara, Km. 26, *Prance* 2156 (K). **Mato Grosso:** Novo Mundo, Parque Est. Christalino, mata proxima a estrada, *Henicka* 285 (K). **Pará:** Km. 0–1.5, line SW of Ilha de Breu, *Prance* 1376 (K). FRENCH GUIANA. Mont Belvédère de la Haute Camopi, bassin de la Camopi, *de Granville* 7171. GUYANA. Upper Takutu–Upper Essequibo, Gunn’s, Essequibo River, *Jansen-Jacobs* 1509 (K). VENEZUELA. **Amazonas:** Rio Mavaca, trail near base camp, *Beck* 911 (K).

62. *Myrcia morroqueimadensis* Kiaersk., Enum. Myrt. Bras., 73. 1893. TYPE: Brazil. Rio de Janeiro: Morro Queimado, 14 Aug. 1873, A. F. M. *Glaziou* 6537 (lectotype, designated here [likely holotype], C-10015873!; isoelectotypes, K-000343766!, LE-00007194!, P-00161210!, P-00161211!, R-000009032!). [Species group C].

Habitat and distribution. *Myrcia morroqueimadensis* is recorded from the moist forests of the hills of Rio de Janeiro and Espírito Santo at altitudes of 500–950 m.

IUCN Red List category. *Myrcia morroqueimadensis* is known to us from the type collection and four other authoratively named collections available via SpeciesLink (2015). These indicate an EOO of < 5000 km² and a small population; the forests on the Atlantic coast of Brazil are under extreme anthropo-

logical pressure. We assign a threat category of Endangered (EN) according to IUCN criteria (2014).

Notes. *Myrcia morroqueimadensis* resembles species with elliptic-obovate leaves and open venation such as *M. coelosepala* and *M. littoralis*. The former species is unique in its thickened, hairy staminal disk and large buds, both unusual characters for *Myrcia* sect. *Aulomyrcia*.

63. *Myrcia multiflora* (Lam.) DC., Prodr. [de Candolle] 3: 244. 1828. Basionym: *Eugenia multiflora* Lam., Encycl. 3: 202. 1789. *Myrtus multiflora* (Lam.) Spreng., Syst. Veg. 2: 485. 1825. *Cumetea multiflora* (Lam.) Raf., Sylva Tellur., 106. 1838. *Aulomyrcia multiflora* (Lam.) O. Berg, Linnaea 27 (1): 47. 1855. TYPE: French Guiana. Cayenne, s.d., *M. Stoupy* s.n. [herb. Lamarck?] (holotype, Hb. Lamarck, not located). [Species group C].

Myrcia heringeriana Mattos, Loefgrenia 126: 2. 2008, syn. nov. *Aulomyrcia goyazensis* O. Berg in C. F. P. von Martius & auct. suc. (eds.), Fl. Bras. 14(1): 85. 1857. TYPE: [Brazil.] Goyaz, s.d., *G. Gardner 3184*, p.p. (lectotype, designated here, W-0032608!; isolectotypes, BM!, K-000304987!, K-000304986!, NY-00386667!, P-05262210!, P-05262214!, W-18890116269!).

Myrcia pallida (O. Berg) N. Silveira, Loefgrenia 88: 2. 1985, syn. nov. *Aulomyrcia pallida* O. Berg in C. F. P. von Martius & auct. suc. (eds.), Fl. Bras. 14(1): 87. 1857. TYPE: [Brazil.] Arrayal Porto Real, in prov. Goyaz, s.d., *J. B. E. Pohl 1061* (lectotype, designated here, W-0037068!; isolectotypes, K-000331535!, K-000344040!, W-0037067!).

Myrcia taubatensis Kiaersk., Enum. Myrt. Bras., 79. 1893, syn. nov. *Aulomyrcia buxifolia* O. Berg in C. F. P. von Martius & auct. suc. (eds.), Fl. Bras. 14(1): 80. 1857. TYPE: [Brazil.] Serra do Sucuriuh in Minas Novas, s.d., *J. B. E. Pohl 1087*, p.p. (lectotype, designated here, BR-0000005238361!).

Habitat and distribution. *Myrcia multiflora* is distributed from Trinidad to tropical South America at altitudes of 5–3000 m.

IUCN Red List category. *Myrcia multiflora* is an extremely widespread species with an EOO > 11 million km². *Myrcia multiflora* is assessed as Least Concern (LC) according to IUCN criteria (2014).

Notes. As transferred by Berg (1855–1856), this species differs from other *Aulomyrcia* species in having regularly branching axillary panicles without persistent bracts. The molecular analysis of Lucas et al. (2011) placed *Myrcia multiflora* in the *Aulomyrcia* clade; the bilocular ovary and extended hypanthium of *M. multiflora* support that placement. In its small leaves that tend to dry green, the species is

sometimes confused with *M. laruotteana* Cambess. and allied species (not treated here); however, the calyx lobes of *M. multiflora* are held upright and never sharply reflexed as in *M. laruotteana*. The bud is constricted above the ovary in *M. laruotteana* and allied species; this is not the case in *M. multiflora*. No herbarium is cited in the protologue, and the type specimen has not been located at P or in the online herbarium of Lamarck (Corsi, 2012), where it is believed to be, with the rest of Lamarck's original material. Until the Lamarck collection is physically checked, we do not consider neotypification. The typification of *A. goyazensis* is complicated by a numbering error that is described by Hochreuter on the NY isolectotype; that label suggests that while *Gardner 3184* is cited in the protologue, a correction “in the copy of Kew HB” (not found) is evidence that the type number is 3186. Study has found sheets of apparently the same collection marked 3184 or 3186; the W lectotype bears 3184 with a loose label marked 3186. The problem may be due to an orthographic misinterpretation of the “4” for a “6” as they have similar formation on some sheets. This is further complicated as Gardner sheets of a gathering of *Psidium riparium* Mart. ex DC. numbered 3184 exist at W and G; we assume these to have been misnumbered. However, if the type was supposed to be 3186, these sheets may represent the original 3184. As it is we assume the type of *A. goyazensis* to be *Gardner 3184* and a mixed gathering, hence its citation pro parte. The lectotypification of *A. buxifolia* is only slightly less complicated. In the protologue, Berg described two varieties; the first, *A. buxifolia* var. *elliptica* O. Berg, matches the specific description closely and is assumed to be typical. Various duplicates of the *Pohl 1087* type gathering exist but only that at M bears “var. *elliptica*,” consistent with Berg having seen it in Martius's herbarium; this gathering is also cited pro parte.

Selected specimens. ARGENTINA. **Buenos Aires:** *Parodi 128* (K). BOLIVIA. **Beni:** 157 km de El Mirador hacia Riberalta, 4 km desoues del desvio a Cobija, *de Michel 2070* (K). **Cochabamba:** Chapare, 1 km Agrigento B, Villa Tunari, *Wood 11508* (K). BRAZIL. **Amapá:** Rio Oiapoque Roche Mon Pere, *Irwin 48642* (K). **Bahia:** Serra Grande, estr. Serra Grande–Ilhéus, *Amorim 355* (K). **Ceara:** Crato, Floresta Nac. Araripe, *Simon 219* (K). **Espírito Santo:** Est. Biol. Santa Lúcia, *Thomaz 1392* (K); Res. Comp. Vale do Rio Doce, estr. Mantegueira, *Lucas 824* (K). **Goias:** Serra do Caiapo, 40 km S of Caiponia, *Prance 59568* (K); Corrego Lajeadao, faz. Bandeirante, 45 km from Doverlandia on rd. to Baliza, *Ratter 7389* (K). **Maranhão:** Caxias, along BR 316 betw. Caxias & Timon, 39 km SE of Caxias & ca. 37 km NW of Teresina, *Thomas 4197* (NY); Maracassume River region, Campode Boa Esperanca, *Froes 2003* (K). **Mato Grosso:** Sinop & Colider, along BR 080, 65 km E of jct. with BR 163, *Thomas 4197* (K). **Minas Gerais:** Parque

Nat. Caraca, *Mazine* 853 (K); Itatiaia, margem da restinga do Ribeirao da Cachoeira, *Peron* 517 (K). **Pará:** Serra dos Carajas, Serra Norte, 25 km E of AMZA Expl. Camp, *Berg* 569 (K); Serra do Cachorro, *Cid Ferreira* 9710 (K). **Paraná:** Sete Quadras, *Hatschbach* 10505 (K). **Piauí:** estr. para Piracuruca entrada a direita ca. 10 km na estrada depois de Brazileira, *Nascimento* 442 (K). **Rio de Janeiro:** Saquarema, estr. Pará–Praia Grande, Saquarema–Restinga, *Sucre* 11365 (K). **Rio Grande do Norte:** São José de Mipibu, Terras do Engenho Taborda, 12 Jan. 1965, *S. Tavares s.n.* (NY). **Rondônia:** 15 km E of 117 km, *Prance* 6876 (K). **Santa Catarina:** Pinhal de Cia, Lauro Muller–Urucanga, *Reitz* 8508 (K). **São Paulo:** faz. Barreiro Rico, *Cesar* 2349 (K); ca. 10 km da cicade em direcao a Lençóis, prox. entrada da faz. Agua do Bugre, *Souza* 9566 (K). **Sergipe:** Estância, Rod. Estância/Abais, com entrada no Km. 11 da Rod. BR 101 (trecho Estância/Aracajú) 20 km ao leste do entrocamento, *Silva* 3015 (NY). FRENCH GUIANA. Pointe Kanawa–Awala-Yalimapo, Région littorale, de *Granville* 135471 (CAY). GUYANA. Upper Takutu–Upper Essequibo, Acarai Mtns., summit & adjaent slopes of Tinarnau Peak, *Henkel* 4984 (NY). PARAGUAY. **Alto Paraguay:** Alto Paraná, *Fiebrig* 6334 (K). TRINIDAD AND TOBAGO. St. George, Piarco, S of Arouca, *Britton* 94 (K). VENEZUELA. **Bolívar:** Represa Guri, ca. 0.5 km SSW of dam, *Liesner* 11040 (NY).

- 64. *Myrcia multiglomerata*** (Amshoff) E. Lucas & C. E. Wilson, comb. nov. Basionym: *Marlierea multiglomerata* Amshoff, *Recueil Trav. Bot. Néerl.* 42: 3. 1950. TYPE: Suriname. Marowijne River, 1861, *A. Kappler* 100 (holotype, U-0008498!). [Species group B].

Habitat and distribution. *Myrcia multiglomerata* is endemic to the Marowijne River region of French Guiana and Suriname; its precise altitude is unknown.

IUCN Red List category. *Myrcia multiglomerata* is known to us from six collections. The exact locality of the type collection is unknown and the EOO is < 10 km². This suggests a conservation status of critically endangered, which is supported by the low number of locations from which it has been collected and threats to the area from anthropogenic activity, e.g., mining and agriculture (EOE, 2015), which put local endemics at risk. It is assessed as Critically Endangered (CR) according to IUCN criteria (2014).

Notes. *Myrcia multiglomerata* has shortened, lateral inflorescences and glomerate flowers, and resembles those grouped by McVaugh (1958) in his *Marlierea* sect. *Myrciopsis*. Amshoff (1950) compares *M. multiglomerata* to *M. guildingiana*, but in the latter species the inflorescence is glabrous and flower buds open at the apex.

Selected specimen. FRENCH GUIANA. Village Wayampi de Trois-Sauts, Bassin de l'Oyapock, *Grenand* 551 (CAY).

- 65. *Myrcia myriantha*** McVaugh, *Mem. New York Bot. Gard.* 18: 116. 1969. TYPE: [Guyana.] Upper Mazaruni River basin: Mt. Ayanganna, NE side, 3 Aug. 1960, *S. S. Tillett* 45013 (holotype, MICH-1109501!; isotypes, F-0065532F!, NY-00405455!, S-052466!, US-00117762!, VEN-75711!). [No species group assignment].

Habitat and distribution. *Myrcia myriantha* is known from the mixed evergreen forests of Guyana at an altitude of ca. 750 m.

IUCN Red List category. *Myrcia myriantha* is known only from the type, hence a very restricted AOO. It is found in an area under threat from low-level anthropogenic activity, e.g., mining and agriculture (EOE, 2015), which puts local endemics at risk. *Myrcia myriantha* is assessed as Vulnerable (VU D2) according to IUCN criteria (2014).

Notes. McVaugh (1969) noted that *Myrcia myriantha* has unisexual flowers; no female flowers have been observed, so the number of locules is unknown. The species has relatively large leaves (to 15 cm), an impressed midvein, and lobes that do not tear. Buds are arranged in tight bunches in well-developed, somewhat asymmetric panicles; small, pointed bracts persist at the bases of terminal rachises. For now we follow McVaugh (1969) in placing this species in *Aulomyrcia*.

- 66. *Myrcia myrtilifolia*** DC., *Prodr.* [de Candolle] 3: 250. 1828. TYPE: [Brazil.] prov. Bahia, s.d., *C. F. P. Martius s.n.* (lectotype, designated here, M-0136931!; isoelectotypes, G-DC!, M-0136931!). [Species group C].

Myrcia dictyophylla (O. Berg) Mattos & D. Legrand, *Loefgrenia* 67: 5. 1975, syn. nov. *Aulomyrcia dictyophylla* O. Berg in C. F. P. von Martius & auct. suc. (eds.), *Fl. Bras.* 14(1): 72. 1857. TYPE: [Brazil.] Minas Gerais: Cachoeira do campo, s.d., *J. B. E. Pohl* 2146 (holotype, W-0040183!).

Myrcia parnajibensis (O. Berg) Kiaersk., *Enum. Myrt. Bras.*, 89. 1893, syn. nov. *Aulomyrcia parnajibensis* O. Berg in C. F. P. von Martius & auct. suc. (eds.), *Fl. Bras.* 14(1): 135. 1857. TYPE: [Brazil.] Ad flumen Parnahiba in prov. Goyaz, s.d., *J. B. E. Pohl* 544 (holotype, W-0048299!).

Myrcia rorida (O. Berg) Kiaersk., *Enum. Myrt. Bras.*, 79. 1893, syn. nov. *Aulomyrcia rorida* O. Berg in Mart., *Fl. Bras.* 14(1): 552. 1859. TYPE: [Brazil.] Rio de S. Marcos prov. Goyazensis, Aug. 1834, *L. Riedel* 2491 (lectotype, designated here, WRchb18890100483!;

isolectotypes, F-0064764F!, K-000261557!, M-0137034!, P-00161108!, P-00161109!, S-052504!, U-0005141!, W-0033240!).

Myrcia rubella Cambess. in A. St.-Hil., Fl. Bras. Merid. 2: 317. 1832, syn. nov. TYPE: [Brazil.] provinciae Goyaz, s.d., A. F. C. de Saint-Hilaire 859 (lectotype, designated here, MPU-010962!; isolectotypes, F-0065562F!, P-00161375!, P-00161376!, P-00161377!).

Habitat and distribution. *Myrcia myrtillifolia* occurs in Bolivia and is common in central and western Brazil from Tocantins and Bahia to Mato Grosso, in cerrado and cerrado rupestre vegetation from 300 to 1100 m.

IUCN Red List category. *Myrcia myrtillifolia* is a relatively common species found throughout Central Brazil and has an EOO > 1,200,000 km². *Myrcia myrtillifolia* is assessed as Least Concern (LC) according to IUCN criteria (2014).

Notes. Berg (1857–1859) cited *Myrcia myrtillifolia* from Rio de Janeiro; this was based on a St. Hilaire collection in Paris that is not conspecific with the type. *Myrcia myrtillifolia* and its synonyms were until very recently considered synonymous with the non-*Myrcia* sect. *Aulomyrcia* species *M. guianensis*. The extensive new synonymy presented here reflects this radical new arrangement. In this sense, *M. myrtillifolia* varies from a tree to a suffrutex and encompasses narrowly elliptic or elliptic-ovate to obovate leaves. Character variation is markedly continuous with all habits found throughout its range. The species is recognized by its sessile leaves or with very short, pinkish petioles; new growth can be lightly pubescent, but the plant is usually glabrous. The adaxial midvein is channeled from the petiole to the center of the leaf, after which it is flat. Venation is reticulate and leaves usually dry pale green. Flower buds and inflorescence rachises are often pink-tinged; inflorescences are markedly delicate. No material of *Aulomyrcia rorida* was found in LE despite its citation in the protologue, and the specimen from W-Rehb was therefore selected. Examination of the type of *A. parnahibensis* in W found the species to be bilocular, despite it being recorded with three locules in the protologue. Sobral (2010) reduced *M. paracatuensis* Kiaersk. into the synonymy of *M. parnahibensis* likely due to this confusion regarding locules and leaf similarity; the former species is trilocular and belongs to the clade in which *M. guianensis* occurs (Lima, in prep.).

Selected specimens. BOLIVIA. **Santa Cruz:** Velasco, Parque Nacional Noel Kempff Mercado, Serrania de

Huanchaca, Wood 25206 (K). BRAZIL. **Distrito Federal:** Brasília, Fazenda Água Limpa na UnB próximo ao Centro de Primatologia, Soares-Silva 751 (K). **Goiás:** Pirenópolis, Serra dos Pirineus a 6 km em direção ao Parque Estadual dos Pirineus, Monteiro 105 (K). **Mato Grosso:** Serra do Garças, Pé da Serra, terreno arenoso, Onishi 1078 (K). **Minas Gerais:** Capitólio, Estrada para Paraíso Perdido, Lima 474 (K); Uberlândia, Reserva Ecológica do Clube Caça e Pesca, Lima 381 (K). **Tocantins:** 69 km from Porto Natl. on the rd. to Ponte Alta, Bridgewater 1076 (K).

67. *Myrcia neobuxifolia* E. Lucas & C. E. Wilson, nom. nov. Replaced name: *Marlierea buxifolia* Amshoff, Bull. Torrey Bot. Club 75: 529. 1948, non *Myrcia buxifolia* Gardner, London J. Bot. 4: 101. 1845. TYPE: [Guyana.] Kaieteur savanna, 4 Sep. 1937, C. I. Sandwith 1340 (holotype, U-0102925!; isotypes, K-000330683!, K-000330684!, NY-00405290!, U-0102925). [No species group assignment].

Habitat and distribution. *Myrcia neobuxifolia* is found in savanna thickets, on rocky ground from Venezuela to Guyana at altitudes of ca. 400–1300 m.

IUCN Red List category. *Myrcia neobuxifolia* has an EOO > 60,000 km², which removes it from an IUCN category of threat. However, we are only aware of seven collections from four distinct localities, suggesting the species is rare. The areas from which this species is known are not under specific threat, but low-level pressures from habitat removal for agriculture and mining are constant. This species is assessed as Near Threatened (NT) according to IUCN criteria (2014).

Notes. *Myrcia neobuxifolia* is a distinctive species with small, rounded leaves and reduced inflorescences; the whole plant is pubescent with white hairs on the inflorescence and young growth turning black with age.

Selected specimens. GUYANA. Wenamu trail, Parima savanna, 6 Nov. 1966, Forest Department of British Guiana 167 (K). VENEZUELA. **Bolívar:** Formacio Roraima, en Rio Cutuni, Km. 130–131 S de El Dorado, Steyermark 104079 (K).

68. *Myrcia neocuprea* E. Lucas & C. E. Wilson, nom. nov. Replaced name: *Marlierea cuprea* Amshoff, Bull. Torrey Bot. Club 75: 530. 1948, non *Myrcia cuprea* (O. Berg) Kiaersk., Enum. Myrt. Bras. 95. 1893. TYPE: [Guyana.] Kurupung; Upper Mazaruni River, s.d., H. Leng 298 (lectotype, designated here [likely holotype], NY-00405293!). [Species group C].

Habitat and distribution. *Myrcia neocuprea* is found in Venezuela, Guyana, Suriname, and French Guiana, along rivers at an altitude of ca. 100 m.

IUCN Red List category. *Myrcia neocuprea* is known to us from six collections, with an EOO of > 50,000 km². This species has a large but fragmented range; the area is under threat from low-level habitat removal from a variety of sources such as mining and agriculture. This species is assessed as Near Threatened (NT) according to IUCN criteria (2014).

Notes. *Myrcia neocuprea* has an impressed mid-vein on adaxial blades and lightly corky petioles, which places it in the decorticans complex of Kawasaki and Holst (1994). *Myrcia neocuprea* is distinctive in its long panicles with persistent bracts and whiplike branchlets covered in red hairs. Flowers tear into four or five very unequal-sized, internally pubescent calyx lobes. Holst (2002) provided further description and suggested an affinity to *M. decorticans* based on shared leaf texture and rimose petioles.

Selected specimens. FRENCH GUIANA. Riviere Arataye, Saut Pararé, *Sastre* 5846 (K). GUYANA. Along Mazaruni River, confluence with Kamarang River, Cuyuni-Mazaruni, *McDowell* 2557 (CAY).

69. *Myrcia neodimorpha* E. Lucas & C. E. Wilson, nom. nov. Replaced name: *Marlierea dimorpha* O. Berg in C. F. P. von Martius & auct. suc. (eds.), Fl. Bras. 14(1): 538. 1859, non *Myrcia dimorpha* (O. Berg) N. Silveira, *Loefgrenia* 88: 1. 1985. TYPE: [Brazil.] Goiatacazes, Lagoa Fria, 1833, *L. Riedel* [341] (lectotype, designated here, LE-00004017!; isoelectotypes, G-00223338!, K-000330498!, LE [2]!). [Species group E].

Habitat and distribution. *Myrcia neodimorpha* is distributed in the littoral rainforests of eastern Brazil from Espírito Santo to northern Rio de Janeiro and is found at altitudes of ca. 15–50 m.

IUCN Red List category. *Myrcia neodimorpha* is known to us from four collections. This species has an EOO of ca. 1500 km² in a biome under acute environmental threat. *Myrcia neodimorpha* is assessed as Endangered (EN) according to IUCN criteria (2014).

Notes. *Myrcia neodimorpha* has large bracts subtending the secondary branchlets of the inflorescence; these bracts resemble leaves and can be present elsewhere other than on the inflorescence, giving the impression that leaves are dimorphic. In

the study of Santos (2014), this species emerges in a clade with *M. amazonica*. The type does not bear resemblance to the latter species; further investigation is required.

Selected specimen. BRAZIL. **Espírito Santo:** Praia de Maroba, *Matsumoto* 828 (K, UEC).

70. *Myrcia neoestrellensis* E. Lucas & C. E. Wilson, nom. nov. Replaced name: *Marlierea estrellensis* O. Berg in C. F. P. von Martius & auct. suc. (eds.), Fl. Bras. 14: 34. 1857, non *Myrcia estrellensis* Kiaersk., Enum. Myrt. Bras., 107. 1893. TYPE: [Brazil. São Paulo:] Serra d'Estrela, Corrego Secco, s.d., *H. Beyrich* s.n. (holotype, B†; lectotype, designated here, illustration from Fl. Bras. 14: tab 14. 1857!). [Species group A].

Habitat and distribution. *Myrcia neoestrellensis* occurs in the coastal cordillera of the Atlantic forests of southeastern Brazil at an altitude of ca. 500 m.

IUCN Red List category. *Myrcia neoestrellensis* is known from the type collection as well as a single gathering from Espírito Santo. The species has a restricted distribution and is evidently rare; it occurs in an environment under acute threat but has been collected recently in the Linhares forest reserve. If this protection was removed, the species would be endangered. *Myrcia neoestrellensis* is assessed as Near Threatened (NT) according to IUCN criteria (2014).

Notes. The illustration (tab. 14) in *Flora Brasiliensis* provides a clear concept of *Myrcia neoestrellensis*. While the modern collection cited here matches this image well, we believe the image conveys Berg's concept more reliably and designate it as the lectotype.

Selected specimen. BRAZIL. **Espírito Santo:** Linhares, Reserva Florestal da CVRD, Estr. Gávea, antiga X-2, Km. 19868, lado esquerdo, *Folli* 319 (CVRD).

71. *Myrcia neoglabra* E. Lucas & C. E. Wilson, nom. nov. Replaced name: *Marlierea glabra* Cambess., Fl. Bras. Merid. 2: 374. 1833, non *Myrcia glabra* (O. Berg) D. Legrand, *Sellowia* 13: 298. 1961. TYPE: Brazil. Sebastianopolis, s.d., *A. F. C. de Saint-Hilaire* s.n. (lectotype, designated here [likely holotype], MPU-010972!; isoelectotypes, P-00217941!, P-00217942!, P-00217943!). [Species group E].

Marlierea grandifolia O. Berg in C. F. P. von Martius & auct. suc. (eds.), Fl. Bras. 14: 37. 1857. TYPE: [Brazil.] Brasilia oriental, s.d., *F. C. Raben* 798 (lectotype, designated here [likely holotype], BR-0000008455215!).

Marlierea schottiana O. Berg in C. F. P. von Martius & auct. suc. (eds.), Fl. Bras. 14: 36. 1857. TYPE: [Brazil.] Rio de Janeiro, s.d., *H. W. Schott 1042* (lectotype, designated here [likely holotype], W-0037116!; isolectotypes, BR-0000008452009!, K-000330499!, K-000330500!, W-0037114!, W-0037115!).

Habitat and distribution. *Myrcia neoglabra* is found in the Brazilian Atlantic forests from southern Bahia to Rio de Janeiro at altitudes of ca. 0–150 m.

IUCN Red List category. *Myrcia neoglabra* is known to us from 10 collections from 10 localities. A distribution from Bahia to Rio de Janeiro supports an EOO of > 100,000 km². Although this EOO prevents assigning a category of threat, the species has not been frequently collected, suggesting it is rare. It has not been collected from protected areas, and threats to the Atlantic rainforest are acute. *Myrcia neoglabra* is assessed as Near Threatened (NT) according to IUCN criteria (2014).

Notes. *Myrcia neoglabra* has raised midveins on adaxial blade surfaces and whorled inflorescences; it can also have cordate or cuneate leaf bases and thickened petioles.

Selected specimens. BRAZIL. **Bahia:** Ilhéus, Faz. Barra do Manguiho, *Mattos Silva 2028* (K). **Espírito Santo:** Reserva Flor. Linhares CVRD, *Lino 78* (K). **Rio de Janeiro:** Corcovado, Caixa d'Água, *Glaziou 4813* (K).

72. *Myrcia neoimperfecta* E. Lucas & C. E. Wilson, nom. nov. Replaced name: *Marlierea imperfecta* McVaugh, Fieldiana, Bot. 29: 176. 1956, non *Myrcia imperfecta* McVaugh, Mem. New York Bot. Gard. 18(2): 95. 1969. TYPE: Peru. Loreto: Mishuyacu, near Iquitos, Jan. 1930, *G. Klug 787* (holotype, US-00117787!; isotypes, F-0040041F!, NY-00405296!). [No species group assignment].

Habitat and distribution. *Myrcia neoimperfecta* is endemic to the wet forests of Peru at an altitude of ca. 100 m.

IUCN Red List category. *Myrcia neoimperfecta* is known to us only from the type; four further authoritatively named collections on TROPICOS® (2015) indicate an EOO of ca. 750 km², centered around Iquitos. It has been assessed by Bocángel et al. (2006) to be Endangered (EN) according to IUCN criteria (2014).

Notes. The species is characterized by three times branching, somewhat cymosely branching panicles to 14 cm, impressed midveins, and relatively

large, acuminate leaves to 25 cm. Flower buds are completely closed, and rachises of the inflorescence are flattened. The large leaves are reminiscent of *M. neomacrophylla* E. Lucas & C. E. Wilson.

73. *Myrcia neomacrophylla* E. Lucas & C. E. Wilson, nom. nov. Replaced name: *Marlierea macrophylla* Amshoff, Recueil Trav. Bot. Néerl. 42: 2. 1950, non *Myrcia macrophylla* DC., Prodr. [de Candolle] 3: 247. 1828. TYPE: British Guiana. 107 m, Bartica–Potaro Rd., 12 Nov. 1943, *D. B. Fanshawe 1454* [Forest Dept. 4190] (lectotype, designated here, K-000261028!; isolectotype, NY-00405298!). [No species group assignment].

Habitat and distribution. *Myrcia neomacrophylla* is found in forest on lateritic soil in Guyana; it is also reported from Venezuela at an altitude of ca. 100 m.

IUCN Red List category. *Myrcia neomacrophylla* is known to us from three collections from three localities with an EOO of ca. 2000 km². *Myrcia neomacrophylla* is assessed as Endangered (EN) according to IUCN criteria (2014).

Notes. *Myrcia neomacrophylla* has long, terminal inflorescences with acutely flattened axes and a flat or slightly channeled midvein. Amshoff noted a similarity with Brazilian *M. neoverticillaris* but indicates larger flowers and non-verticillate leaves in *M. neomacrophylla*. The distinctive flattened inflorescence axes of the type of *M. neomacrophylla* are not shared by *M. neoverticillaris*; *M. neomacrophylla* also has completely closed buds. In these respects, *M. neomacrophylla* resembles *M. neoimperfecta*. TROPICOS® (2015) cited a specimen from Venezuela with no further details.

Selected specimen. GUYANA. **Potaro-Siparuni:** Eagle Mtn., *Fanshawe 1126* [Forest Dept. 3862] (K).

74. *Myrcia neomontana* E. Lucas & C. E. Wilson, nom. nov. Replaced name: *Eugenia montana* Aubl., Hist. Pl. Guiane 1: 495. 1775, non *Myrcia montana* Cambess., Fl. Bras. Merid. (A. St.-Hil.) [quarto ed.] 2(19): 325. 1829 [1832]. *Cumetea montana* (Aubl.) Raf., Sylva Tellur., 106. 1838. *Marlierea montana* (Aubl.) Amshoff, Recueil Trav. Bot. Néerl. 39: 147. 1942. *Myrcianthes montana* (Aubl.) C. Nelson, Anales Jard. Bot. Madrid 57: 406. 1999 [2000]. TYPE: French Guiana. Lupra montem Serpent dictum, 1775, *J. B. C. F. Aublet s.n.* (holotype, BM-000754877!). [No species group assignment].

Habitat and distribution. *Myrcia neomontana* is frequent in northern South America at altitudes of ca. 1000–1400 m.

IUCN Red List category. *Myrcia neomontana* is known to us from 40 collections and is very well represented in online herbaria; this common and widespread species (EOO > 1 million km²) does not qualify for an IUCN environmental threat category. *Myrcia neomontana* is assessed as Least Concern (LC) according to IUCN criteria (2014).

Notes. *Myrcia neomontana* is a common and widespread species distinctive in its rounded, sessile to subsessile leaves and cymose, symmetrical inflorescences terminating in neat dichasia. The dichasial flowers and markedly reflexed calyx lobes are reminiscent of *Myrcianthes* O. Berg and *Myrcia tomentosa* (Aubl.) DC., respectively. The species is bilocular with an extended, tearing hypanthium. Molecular analyses (Staggemeier et al., 2015) confirm this species in *Myrcia* sect. *Aulomyrcia*.

Selected specimens. COLOMBIA. **Vaupés:** Mitu & vic., along rd. from town, *Zarucchi 1586* (K). FRENCH GUIANA. Piste de Saint-Elie, *Prévost 1635* (CAY). GUYANA. E Berbice-Corentyne, Thomson farm, S of Timehri, *Maas 3603* (K); Pakaraima Mtns., Imbaimadai Creek, W of Imbaima, Mazaruni-Potaro, *Pipoly 7971* (CAY). SURINAME. **Marowijne:** via secte ab Moengo tapoe ad Grote Zwiebelzwamp, *Lanjouw 886* (K). **Sipaliwini:** Tafelberg (Table Mtn.), *Maguire 24693* (K). VENEZUELA. **Amazonas:** Cerro Yapacana, *Steyermark 103122* (K).

75. *Myrcia neoobscura* E. Lucas & C. E. Wilson, nom. nov. Replaced name: *Marlierea obscura* O. Berg in C. F. P. von Martius & auct. suc. (eds.), Fl. Bras. 14: 36. 1857, non *Myrcia obscura* (O. Berg) N. Silveira, Roessleria 7(1): 66. 1985. TYPE: [Brazil.] Minas Gerais: Presidio de S. João-Baptista, s.d., *F. Sellow s.n.* (holotype, B†; lectotype, designated here, BR-0000008455635!; isoelectotypes, K-000170002!, LE!, US-00169640!). [Species group E].

Habitat and distribution. *Myrcia neoobscura* is distributed in the Atlantic forests and campos rupestres of Bahia and Minas Gerais, Brazil, at altitudes of 1200–1500 m.

IUCN Red List category. *Myrcia neoobscura* is known to us from 11 collections representing an EOO > 130,000 km². *Myrcia neoobscura* is assessed as Least Concern (LC) according to IUCN criteria (2014).

Notes. *Myrcia neoobscura* is a common species characterized by gray, glaucous, chartaceous leaves, a lack of indumentum, a raised midvein, and peeling bark.

Selected specimens. BRAZIL. **Bahia:** Abaíra, Bem Querer, *Nic Lughadha 50207* (K). **Minas Gerais:** Ouro Preto, Est. Ecol. Tripui, *Peron 457* (K).

76. *Myrcia neoregeliana* E. Lucas & C. E. Wilson, nom. nov. Replaced name: *Marlierea regeliana* O. Berg in C. F. P. von Martius & auct. suc. (eds.), Fl. Bras. 14: 537. 1859, non *Myrcia regeliana* O. Berg in C. F. P. von Martius & auct. suc. (eds.), Fl. Bras. 14: 562. 1859. TYPE: [Brazil.] s.d., *L. Riedel & Langsdorff 785* (lectotype, designated here, LE-00004037!; isoelectotypes, K-000330488!, LE [3]!, P-01902221!, W-18900002612!). [Species group E].

Habitat and distribution. *Myrcia neoregeliana* occurs in primary and secondary Atlantic rainforests of eastern Brazil, from Bahia to Santa Catarina at altitudes of ca. 15–50 m.

IUCN Red List category. *Myrcia neoregeliana* is known to us from 14 collections and is well represented in online herbaria. This relatively common and widespread species (EOO > 400,000 km²) does not qualify for an IUCN environmental threat category. *Myrcia neoregeliana* is assessed as Least Concern (LC) according to IUCN criteria (2014).

Notes. The type of *Myrcia neoregeliana* is glabrous but bears resemblance to *M. neoriedeliana*. *Marlierea regeliana* var. *parviflora* Kiaersk. is densely pubescent and is synonymized in *Myrcia neoriedeliana* here. Of the four sheets at LE, only one bears the names Riedel and Langsdorff. The remaining sheets at LE, K, and W bear the name Riedel, are morphologically very similar, and are assumed to be from the same collection.

Selected specimens. BRAZIL. **Bahia:** Ilhéus, area do CEPEC, *Hage 2230* (K). **Distrito Federal:** Cotia, *Pereira 4224* (K). **Espírito Santo:** Reserva CVRD, Estr. Cainga, *Matsumoto 821* (K). **Rio de Janeiro:** Paratinuirim, estrada par leva, *Jacques 90* (K). **Santa Catarina:** Itajaí, Cunhas, *Reitz 1894* (NY).

77. *Myrcia neoriedeliana* E. Lucas & C. E. Wilson, nom. nov. Replaced name: *Eugeniopsis riedeliana* O. Berg in C. F. P. von Martius & auct. suc. (eds.), Fl. Bras. 14: 561. 1859, non *Myrcia riedeliana* O. Berg in C. F. P. von Martius & auct. suc. (eds.), Fl. Bras. 14(1): 565. 1859. *Marlierea riedeliana* (O. Berg) D. Legrand,

Comun. Bot. Mus. Hist. Nat. Montevideo 3(40): 31. 1962. TYPE: [Brazil.] Ilheos [Iheus]: Castel, Bahia, s.d., *L. Riedel & Langsdorff 415* (lectotype, designated here, LE-00004040!; isoelectotype, LE!). [Species group E].

Marlierea regeliana O. Berg var. *parviflora* Kiaersk., Enum. Myrt. Bras., 44. 1893, syn. nov. TYPE: [Brazil.] Rio de Janeiro, Nov. 1879, *A. F. M. Glaziou 10787* (lectotype, designated here, C-10015782!; isoelectotypes, C-10015783!, G-00359530!, K-000330489!, LE!, R-000008937!).

Habitat and distribution. *Myrcia neoriedeliana* occurs in primary and secondary Atlantic rainforests of eastern Brazil, from Bahia to Santa Catarina at altitudes of 50–1075 m.

IUCN Red List category. *Myrcia neoriedeliana* is a widespread (EOO > 200,000 km²) and relatively well-collected species from a biome under acute environmental threat. *Myrcia neoriedeliana* is assessed as Near Threatened (NT) according to IUCN criteria (2014).

Notes. Specimens of *Myrcia neoriedeliana* in widespread herbaria have been given the name *Marlierea obscura*, apparently misapplied. *Myrcia neoriedeliana* has a sunken midrib with a whorled, terminal inflorescence reminiscent of *M. amazonica*; *M. neoriedeliana* is distinguished from *M. amazonica* by its consistently larger leaves and distinctively shaggy indumentum on new growth and the underside of the midrib. Specimens from Santa Catarina at Kew are particularly endowed with indument; after close analysis, we include them and extend the species range. Berg cited unnumbered Riedel material from LE where two sheets collected by Riedel and Langsdorff were found; these match the protologue well, bear Berg's handwriting, and are assumed to be the type material.

Selected specimens. BRAZIL. **Paraná:** Alexandra, *Dusén 8319* (K). **Rio de Janeiro:** Silva Jardim, Reserva Biol. Poço das Antas, *Guedes 2284* (K). **Santa Catarina:** Itajaí, Morro da Fazenda, *Klein 1216* (K). **São Paulo:** Cunha, Parque Est. Serra do Mar, trilha do Rio Bonito, próx. da sede, *Lucas 403* (K).

78. *Myrcia neurostrata* Sobral, Novon 16: 136. 2006. Replaced name: *Aulomyrcia rostrata* O. Berg in C. F. P. von Martius & auct. suc. (eds.), Fl. Bras. 14: 544. 1859, non *Myrcia rostrata* DC., Prodr. [de Candolle] 3: 325. 1828. TYPE: [Brazil.] Bahia, s.d., *R. Blanchet 1880* (lectotype, designated here, LE!). [No species group assignment].

Habitat and distribution. *Myrcia neurostrata* is known from the moist forests of eastern Brazil in Bahia and is likely to also occur in Espírito Santo; its altitude is not precisely known.

IUCN Red List category. *Myrcia neurostrata* is known only from the type from an unspecified locality. *Myrcia neurostrata* is assessed as Data Deficient (DD) according to IUCN criteria (2014).

Notes. The type of *Myrcia neurostrata* has chartaceous, green young leaves reminiscent of *M. multiflora*. Mature leaves are contrasting dark brown and coriaceous. The buds, however, have clearly defined calyx lobes more typical of other species in *Myrcia* sect. *Aulomyrcia*. An image of a specimen from Espírito Santo cited as this species by Sobral (2007) is not a perfect match for the type.

Selected specimen. BRAZIL. **Espírito Santo:** Santa Teresa, Nova Lombardia, Reserva Biol. Augusto Ruschi, Goipabo-açu, *Vervloet 1331* (MBML).

79. *Myrcia neoschomburgkiana* E. Lucas & C. E. Wilson, nom. nov. Replaced name: *Marlierea schomburgkiana* O. Berg, Linnaea 29: 209. 1858, non *Myrcia schomburgkiana* O. Berg, Linnaea 27: 110. 1855. TYPE: Guyana. Upper Demarara River, Sep. 1889, *G. S. Jenman 4176* (neotype, designated by McVaugh [1969: 68], K-000330632!). [Species group B].

Habitat and distribution. *Myrcia neoschomburgkiana* is found in forests and on riversides from northern South America to Peru; it occurs at altitudes of 100–1000 m.

IUCN Red List category. *Myrcia neoschomburgkiana* is known to us from 27 collections from 23 localities and is well represented in online herbaria. The EOO is estimated at > 300,000 km², including areas under low specific environmental threat. *Myrcia neoschomburgkiana* is assessed as Least Concern (LC) under IUCN criteria (2014).

Notes. McVaugh (1969) suggests resemblance of *Myrcia neoschomburgkiana* to *M. graciliflora*. This species also resembles *M. caudata* and *M. neotovarensis* in its reduced inflorescence and acuminate leaves, suggesting inclusion in the group of species defined by McVaugh (1958) as *Marlierea* sect. *Myrciopsis*. An annotation on TROPICOS® (2015) cites *Spruce 1505* as the type. We can find no reference to this or this collection, and the protologue provides no collection or locality.

Selected specimens. ECUADOR. **Morona-Santiago:** Taisha, *Cazalet* 7525 (NY). FRENCH GUIANA. **Potaro-Siparuni:** Upper Potaro River, 0–2 km N of camp, NE of toe slope of Mt. Wokomung, *Clarke* 1909 (K). GUYANA. **Cuyuni-Mazaruni:** Kamarang, trail W of airstrip, *Boom* 8311 (K). **Upper Demerara-Berbice:** Anarika, 5 mi. E of Essequibo River, *Chanderbali* 34 (K). PERU. **Loreto:** Requena, *Cheta* 161 (K). SURINAME. **Nickerie:** Kabalebo Dam Project, *Lindeman* 367 (K). VENEZUELA. **Bolívar:** Gran Sabana, 10 km SW of Karaurin Tepui, *Liesner* 23633 (K).

80. *Myrcia neosuaveolens* E. Lucas & C. E. Wilson, nom. nov. Replaced name: *Marlierea suaveolens* Cambess., Fl. Bras. Merid. 2: 374. 1833, non *Myrcia suaveolens* Cambess., Fl. Bras. Merid. 2: 315. 1833. TYPE: Brazil, 1816–1824, *A. F. C. de Saint-Hilaire s.n.* (lectotype, designated here [likely holotype], P-00217963!; isolectotypes, MPU-010973!, P-00217963!). [Species group E].

Habitat and distribution. *Myrcia neosuaveolens* is found on the hillsides and primary forests of southeastern Brazil, from Rio de Janeiro to Santa Catarina, at altitudes of 300–1100 m.

IUCN Red List category. *Myrcia neosuaveolens* is a widespread (EOO > 230,000 km²), distinctive, and well-collected species. It is assessed as Least Concern (LC) according to IUCN criteria (2014).

Notes. *Myrcia neosuaveolens* is a species with small elliptic-acuminate leaves and reduced inflorescences. Specimen records with qualified identifications available online without images (e.g., *A. L. Peixoto* 3283, MO not seen) suggest this species may also occur in Espírito Santo.

Selected specimens. BRAZIL. **Paraná:** Campina Grande do Sul, Sítio do Belizário, *Hatschbach* 16878 (NY). **Rio de Janeiro:** Petrópolis, Correias, Bon fim, *Marques* 129 (K). **Santa Catarina:** Braço Joaquim, Luis Alves, Itajaí, *Klein* 2055 (NY). **São Paulo:** Sete Barras, PE Carlos Botelho, *Lucas* 85 (K).

81. *Myrcia neotomentosa* E. Lucas & C. E. Wilson, nom. nov. Replaced name: *Marlierea tomentosa* Cambess., Fl. Bras. Merid. 2: 373. 1833, non *Myrcia tomentosa* (Aubl.) DC., Prodr. [de Candolle] 3: 245. 1828. TYPE: Brazil. São Paulo, 1816–1821, *A. F. C. de Saint-Hilaire s.n.* (lectotype, designated here [likely holotype], MPU-010974!; isolectotypes, MICH-1109454!, P-01902216!, P-01902217!). [Species group E].

Myrcia strigipes Mart., Flora 24 (2 Beibl.): 108. 1841. TYPE: [Brazil.] Ad Ilheos, 1841, *C. F. P. Martius* 686 (lectotype, designated here, BR-0000005236510!; isolectotypes, BM-000884401!, BR-0000005236428!, F-

0044416F!, F-0065397F!, G-00223165!, G-00223166!, HAL-0107497!, K-000001427!, K-000001428!, LE-00007230!, LE-00007232!, LE-00007233!, M-0171093!, M-0171094!, MICH-1109545!, NY-00405483!, P-01902218!, P-01902219!, W-0025480!, W-18890341993!).

Habitat and distribution. *Myrcia neotomentosa* is found within the moist forests of eastern Brazil, from Bahia to Santa Catarina, at altitudes of 50–1200 m.

IUCN Red List category. *Myrcia neotomentosa* is a widespread (EOO > 500,000 km²), distinctive, and well-collected species. *Myrcia neotomentosa* is assessed as Least Concern (LC) according to IUCN criteria (2014).

Notes. Lectotypifications for *Marlierea tomentosa* and *Myrcia strigipes* follow annotations available online (Global Plants, 2015) made by Kazue Matsumoto during studies of southeastern Brazilian *Marlierea*, but not formally published. For the latter species, the specimen in BR represents the most complete material, so we have maintained it as the lectotype over the M holdings. *Myrcia neotomentosa* is an abundantly pubescent species of the group with thickened leaves, a raised adaxial midvein, and long, whorled, terminal inflorescences.

Selected specimens. BRAZIL. **Bahia:** Ramal a esquerda na estrada Ubaitaba/Itacaré, a 4 km do loteamento da Marambaia, *Amorim* 449 (NY). **Espírito Santo:** Praia dos Neves, ca. 3 km ao N da divisa com RJ, *Araújo* 5614 (NY). **Paraná:** Jacerehy, *Jönsson* 79 (K). **Rio de Janeiro:** Teresópolis, Serra dos Órgãos, Pedra do Sino, *Matsumoto* 712 (K). **Santa Catarina:** Brusque, Mata S. Pedro, *Klein* 135 (NY). **São Paulo:** Ubatuba, Serra do Mar, along rd. from Ubatuba to Taubate. Km. 78–89, *Morawetz* 19875 (K).

82. *Myrcia neotovarensis* E. Lucas & C. E. Wilson, nom. nov. Replaced name: *Marlierea towarensis* O. Berg, Linnaea 27: 13. 1855, non *Myrcia towarensis* O. Berg, Linnaea 27: 118. 1855. TYPE: Venezuela. Tovar, s.d., *J. W. K. Moritz* 1629 (holotype, B†; lectotype, designated here, BM-000953741!; isolectotypes, BM-000953746!, F-0044417F!, GH-00069928!, K-000261019!, K-000330860!, NY-00405309!, P-01902213!, P-01902214!). [Species group B].

Habitat and distribution. *Myrcia neotovarensis* is found in subalpine Venezuela; its altitude is not precisely known.

IUCN Red List category. *Myrcia neotovarensis* is known only from the type (hence a very restricted EOO), from a relatively well-botanized area. The exact type locality is unspecified and not known to be

protected, but subalpine Venezuela is generally threatened by ongoing deforestation, putting local endemics at risk. *Myrcia neotovarensis* is assessed as Vulnerable (VU D2) according to IUCN criteria (2014).

Notes. *Myrcia neotovarensis* is a species with small elliptic-acuminate leaves, channeled midveins, and reduced inflorescences that resemble *M. caudata* and *M. neosuaveolens*, suggesting an affinity with *Marlierea* sect. *Myrciopsis*.

83. *Myrcia neovelutina* E. Lucas & C. E. Wilson, nom. nov. Replaced name: *Marlierea velutina* McVaugh, Fieldiana, Bot. 29: 178. 1956, non *Myrcia velutina* O. Berg in C. F. P. von Martius & auct. suc. (eds.), Fl. Bras. 14(1): 182. 1857. TYPE: Brazil. Guapore: Falls of Madeira, Oct. 1886, *H. H. Rusby* 2683 (holotype, F-0044418F!; isotypes, G-00222985!, K-000895963!, MICH-1109451!, P-01902212!, US-00997539!). [No species group assignment].

Habitat and distribution. *Myrcia neovelutina* occurs from Peru to Brazil and has been recorded from the Madeira River and Rio Branco in Acre, Amazonas, and Rondônia; its altitude is not precisely known.

IUCN Red List category. *Myrcia neovelutina* has a wide range with few known collections, none from a known protected area. The Madeira and Rio Branco Rivers and their associated vegetation are under threat from developing hydroelectric projects in the area (EOE, 2015). *Myrcia neovelutina* is assessed as Vulnerable (VU D2) according to IUCN criteria (2014).

Notes. McVaugh (1956b) provided an unusually short description of *Myrcia neovelutina* and noted a resemblance of the indumentum to *Gomidesia*; however, the deeply tearing 4-lobed calyx prompted him to describe this species in *Marlierea*. Young fruits are ridged. In addition to the type locality, McVaugh believed the species would probably occur in Peru.

Selected specimen. BRAZIL. **Amazonas:** basin of Rio Purus, Lábrea, *Prance* 8163 (NY).

84. *Myrcia neoverticillaris* E. Lucas & C. E. Wilson, nom. nov. Replaced name: *Marlierea verticillaris* O. Berg in C. F. P. von Martius & auct. suc. (eds.), Fl. Bras. 14: 538. 1859, non *Myrcia verticillaris* O. Berg in C. F. P. von Martius & auct. suc. (eds.), Fl. Bras. 14(1): 206. 1857.

TYPE: Brazil. Bahia: flumen Itahype prope Castel novo, s.d., *L. Riedel* 534 (lectotype, designated here, LE-00004048!; isolectotypes, G-00222986!, K-000330440!, LE [2]!, P-00217957!). [No species group assignment].

Habitat and distribution. *Myrcia neoverticillaris* is found in the Atlantic forests and restingas of northeastern Brazil at altitudes of 10–40 m.

IUCN Red List category. *Myrcia neoverticillaris* occurs in several locations in and around Ilhéus. Although its EOO (ca. 1000 km²) is less than the minimum size for an endangered assessment, it has been collected recently and several times in the well-protected Una Biological reserve. Any change to its level of protection would result in an immediate increased threat. *Myrcia neoverticillaris* is assessed as Vulnerable (VU D2) according to IUCN criteria (2014).

Notes. *Myrcia neoverticillaris* is defined by its verticillate leaves and is clearly of the group with thickened leaves, a raised adaxial midvein, and long, densely whorled (verticillate), terminal inflorescences.

Selected specimen. BRAZIL. **Bahia:** Una, Reserva Biol. Mico-Leão, entrada no Km. 46 da Rod. BA-001 Ilhéus/Una, *Amorim* 1427 (NY).

85. *Myrcia neuwiedean* (O. Berg) E. Lucas & C. E. Wilson, comb. nov. Basionym: *Rubachia neuwiedean* O. Berg in C. F. P. von Martius & auct. suc. (eds.), Fl. Bras. 14: 29. 1857. *Marlierea neuwiedean* (O. Berg) Nied. in H. G. A. Engler & K. A. E. Prantl, Nat. Pflanzenfam. 3(7): 77. 1893. TYPE: [Brazil.] Rio de Janeiro, s.d., *A. P. M. Neuwied* s.n. (lectotype, designated here [likely holotype], BR-0000005236541!; isolectotype, MEL not seen). [Species group E].

Habitat and distribution. *Myrcia neuwiedean* occurs in the Atlantic forests of Brazil, from Bahia to Espírito Santo, at altitudes from 5 to 70 m.

IUCN Red List category. *Myrcia neuwiedean* is a relatively well- and recently collected species with an EOO > 16,000 km² occurring only but frequently in littoral vegetation of the Atlantic forest and under acute environmental threat. Due to its relative frequency of collection as evidenced by gatherings listed on SpeciesLink (2015), *M. neuwiedean* is assessed as Least Concern (LC) according to IUCN criteria (2014).

Notes. *Myrcia neuwiedean* is a distinctive species with cordate leaves and conspicuous bracts that subtend the flowers.

Selected specimens. BRAZIL. **Bahia:** Santa Cruz Cabralia, arredores, *Hatschbach* 53479 (NY). **Espírito Santo:** Linhares, Res. Comp. Vale do Rio Doce, estrada Gávea, Km. 4.5, *Lucas* 886 (K).

86. *Myrcia nubicola* McVaugh, Mem. New York Bot. Gard. 18: 116. 1969. TYPE: Venezuela. Amazonas: Cerro Huachamacari, Rio Cunucuma, summit camp vic., 6–17 Dec. 1960, *B. Maguire* 30045 (holotype, MICH-1109499!; isotypes, NY-00405458!, US-00117763!, VEN-76095!). [No species group assignment].

Habitat and distribution. *Myrcia nubicola* is common on steep slopes in elfin forests of southern Venezuela to Guyana at altitudes between 1000 and 2300 m.

IUCN Red List category. *Myrcia nubicola* is known to us from three collections from three localities but cited by McVaugh (1969) as one of the best-collected species of the Guyana Highlands and well represented in online herbaria. Its EOO is > ca. 150,000 km² from an area under low specific environmental threat. *Myrcia nubicola* is assessed as Least Concern (LC) according to IUCN criteria (2014).

Notes. *Myrcia nubicola* is a short (leaves 2–5 cm), ovate-leaved species with smooth petioles and abundant axillary panicles. *Myrcia nubicola* has four calyx lobes and was described by McVaugh in *Myrcia* sect. *Aulomyrcia*. The calyx lobes are internally glabrous, the petiole is smooth, and the panicle is relatively symmetrical, making it unlikely to be of the decorticans complex of Holst and Kawasaki (2004) despite its revolute, small leaves. Holst (2002) provided additional specimen citations.

Selected specimens. GUYANA. Mt. Ayanganna, easternmost peak, Cuyuni-Mazaruni, *Pipoly* 11115 (CAY, K). VENEZUELA. **Amazonas:** *Nee* 31112 (NY). **Bolívar:** Cedenó, Meseta de Jaua, *Huber* 13036 (K).

87. *Myrcia obversa* (D. Legrand) E. Lucas & C. E. Wilson, comb. nov. Basionym: *Rubachia spathulata* O. Berg in C. F. P. von Martius & auct. suc. (eds.), Fl. Bras. 14: 535. 1859. Replaced name: *Marlierea obversa* D. Legrand, Comun. Bot. Mus. Hist. Nat. Montevideo 3(40): 28. 1962, non *Myrcia spathulata* (O. Berg) Kiaersk., Enum. Myrt. Bras. 72. 1893. TYPE: [Brazil.]

Rio de Janeiro: ad vicum Uba, Aug. 1821, *L. Riedel* s.n. (lectotype, designated here, LE-00004049!; isoelectotypes, LE [3]!, P-05209045!). [Species group A].

Habitat and distribution. *Myrcia obversa* is known from littoral Atlantic forests of Rio de Janeiro to Bahia, Brazil, at an altitude of ca. 50 m.

IUCN Red List category. *Myrcia obversa* has an EOO of ca. 36,000 km²; it is known to us from six collections from five localities but is common in local Brazilian herbaria (speciesLink, 2015). *Myrcia obversa* is assessed as Least Concern (LC) according to IUCN criteria (2014).

Notes. *Myrcia obversa* is a distinct species often with particularly large fruit (to 3 cm diameter). Leaves are decussate with corky petioles; the bark is thickened and shiny below the inflorescence, with the scars of previous inflorescences visible at the nodes. Thickened inflorescence rachises and petioles of young leaves are covered in straw-colored hairs. Buds are large (ca. 0.6 mm wide). Bracts often subtend buds and inflorescences. *Myrcia obversa* is related to congeners with thickened leaves, raised midveins on adaxial blades, and long, whorled, terminal inflorescences such as in *M. insularis* and *M. hexasticha*.

Selected specimens. BRAZIL. **Bahia:** Porto Seguro, Reserva Flor. Porto Seguro, CVRD, *Folli* 849 (K). **Espírito Santo:** Linhares, Reserva Ecológica de Linhares, CVRD, Estrada Jacaranda, *Matsumoto* 820 (K).

88. *Myrcia platyclada* DC., Prodr. [de Candolle] 3: 244. 1828. TYPE: French Guiana, s.d., *Anonymous* s.n. (holotype, G-DC not seen, G-DC photo at F!). [Species group C].

Habitat and distribution. *Myrcia platyclada* has been collected from lowland tropical rainforest, from the Lesser Antilles and Panama to northern Brazil, from altitudes of ca. 300–700 m.

IUCN Red List category. *Myrcia platyclada* is an extremely widespread species and is considered of Least Concern (LC) according to IUCN criteria (2014).

Notes. *Myrcia platyclada* has symmetrical architecture, absent bracts, discoloured leaves, and faint blade venation; it is reminiscent of *M. exploratoris* from which it differs in its glabrous flowers and axes. *Myrcia exploratoris* grows at consistently higher altitudes. The leaves of *M. platyclada* are distinctly

spatulate but can have blunt-acuminate to rounded tips. Santos (2014) recorded *M. platyclada* as emerging in a clade that corresponds to species group C as presented here. Holst (2002) provided additional specimen citations.

Selected specimens. BRAZIL. **Amapá:** Mazagão Camai-pi, EMBRAPA Reserve & vic., 30 km NW of Mazagão, *Mori* 17514 (K). **Amazonas:** Presidente Figueiredo, próximo ao igarapé, *Santos* 766 (K). **Pará:** Rod. Belém–Brasília, Km. 97, *Kulhmann* 176 (K). **Roraima:** Mt. Roraima, *E Ule* 8672 (K). FRENCH GUIANA. **Cayenne:** Fleuve Sinnamary, env. 3400 km sur la river Courcibo, *Oldeman* 1182 (K). GRENADA. s. loc., *Sherring* s.n. (K). GUYANA. **Cuyuni-Mazaruni:** Pakaraima Mtns., *Hoffman* 1746 (K). ST. LUCIA. Fond St. Jacques, *Ramage* s.n. (K). SURINAME. **Sipaliwini:** Lely Mtns., SW plateau, *Lindeman* 251 (K). TRINIDAD AND TOBAGO. Arima Blanchisseuse, *Marshall* 12680 (K).

89. *Myrcia polyantha* DC., Prodr. [de Candolle] 3: 252. 1828. TYPE: Brazil. Bahia: in campestribus apricis supra granitiden, prope S. Anna in desertis, s.d., *C. F. P. Martius* s.n. (lectotype, designated here, M-0136912!; isolectotypes, K-000262364!, M-0136911!). [Species group C].

Habitat and distribution. *Myrcia polyantha* is found in northeastern Brazil, from Piauí to Bahia and Goiás in tabuleiro, cerrado, and scrubby forest vegetation and on sandy soils at altitudes of 50–500 m.

IUCN Red List category. *Myrcia polyantha* is known to us only from the type and one other collection. Approximately 60 authoritatively named specimens are cited online (speciesLink, 2015), indicating a relatively common species with an EOO > 20,000 km². *Myrcia polyantha* is assessed as Least Concern (LC) according to IUCN criteria (2014).

Notes. The type of *Myrcia polyantha* has tightly bunched whorls of inflorescences emerging at a single bracteose node, a characteristic more usually associated with species emerging in clade 8 of Lucas et al. (2011) such as *M. tomentosa*. However, the venation and bud shape of this species are reminiscent of *M. multiflora* as are specimens with images available on Lista do Brasil (Sobral et al., 2015); on balance, this persuades us to include the species in *Myrcia* sect. *Aulomyrcia*; it also emerges in this group in the study of Staggemeier et al. (2015). No material of the Martius type collection was found in the BR herbarium.

Selected specimen. BRAZIL. **Bahia:** Subaúma, Entre Rios, 1 Jan. 1997, *Sobral* s.n. (FURB).

90. *Myrcia porphyrea* McVaugh, Mem. New York Bot. Gard. 18: 119. 1969. TYPE: British Guiana [Guyana.] Pakaraima Mtns., Imbaimadai savannas, upper Mazaruni River, 21 Oct. 1951, *B. Maguire* 32159 (holotype, MICH-1109562!; isotypes, NY-00405467!, US-00117769!, VEN-76154!). [Species group C].

Habitat and distribution. *Myrcia porphyrea* is endemic to the Imbaimadai region of the Pakaraima Mountains in Cuyuni-Mazaruni, Guyana, with an altitude of ca. 550 m.

IUCN Red List category. *Myrcia porphyrea* is known to us from five gatherings, each close to the type locality. *Myrcia porphyrea* has a very restricted EOO in an area we assume to be unprotected and under threat from mining activity (EOE, 2015). *Myrcia porphyrea* is assessed as Vulnerable (VU D2) according to IUCN criteria (2014).

Notes. *Myrcia porphyrea* is very distinct in its thick reticulate leaves. Inflorescences, particularly in bud, are similar to those of *M. inaequiloba* in having short pedicels, small buds that dry darkly colored (vs. the pale or reddish hairs that cover the inflorescence axes), and outer calyx lobes. McVaugh (1969) struggled to assign this species to a section.

Selected specimen. GUYANA. Cuyuni-Mazaruni, Imbaimadai, Upper Mazaruni River, *Davis* 348 (K).

91. *Myrcia portoricensis* (Britton) Cedeño-Mald. & Breckon ex F. S. Axelrod, Syst. Vademec. Vasc. Pl. Puerto Rico, 227. 2011. Basionym: *Calyptranthes portoricensis* Britton, Bull. Torrey Bot. Club 51: 11. 1924. TYPE: Puerto Rico. Monte Alegrillo, 1 Jan. 1913, *F. L. Stevens* 4718 (holotype, NY00084464!). [Species group B].

Habitat and distribution. *Myrcia portoricensis* is endemic to the montane forests of Puerto Rico at altitudes of ca. 300–800 m.

IUCN Red List category. *Myrcia portoricensis* is known to us from five collections including those of the synonymous *M. portoricensis* Alain, all from the Maricao forest. The Maricao State Forest Reserve is under relatively low environmental pressure; therefore, this species should be under low threat, despite its apparently very restricted distribution and low population size. This species is of Least Concern (LC) according to IUCN criteria (2014).

Notes. *Myrcia portoricensis* is remarkable in its extremely regular, terminal cymose inflorescences that are reminiscent of strictly cymose species from *Calyptranthes* or clade 7 of Lucas et al. (2011) in addition to calyptrate flowers. Santos (2014) found the species to emerge in the clade of *Myrcia* sect. *Aulomyrcia*, which made it possible to see associated characters, such as flattened rachises and cymose inflorescences, as found in species group B.

Selected specimen. PUERTO RICO. Maricao state forest, Rd. 120, Km. 15.6 (S side), *Proctor 41752* (IJ).

92. *Myrcia ptariensis* (Steierm.) McVaugh, Mem. New York Bot. Gard. 18: 103. 1969. Basionym: *Aulomyrcia ptariensis* Steierm., Fieldiana, Bot. 28: 1006. 1957. TYPE: [Venezuela.] Bolívar: Ptari-tepui, 1 Nov. 1944, *J. A. Steyermark 59724* (holotype, F-0064758F!; isotype, U-0005137!). [No species group assignment].

Habitat and distribution. *Myrcia ptariensis* is known from forested sandstone on the tepuis of Venezuela in Bolívar from altitudes of ca. 1700–1800 m.

IUCN Red List category. *Myrcia ptariensis* is known to us from eight relatively close collections, with an EOO < 2000 km². Apparently locally common on the tepuis of Bolívar State in Venezuela, the species is not well represented; this is likely due to low levels of collecting in the area. The tepuis of Venezuela are subject to significant local threats (EOE, 2015), but their inaccessibility means that their vegetation is mostly intact. *Myrcia ptariensis* is assessed as Vulnerable (VU) according to IUCN criteria (2014).

Notes. Steyermark believed *Myrcia ptariensis* has an affinity to *M. neobuxifolia*. *Myrcia ptariensis* is distinguished by reduced hairy inflorescences, smooth petioles, and a raised midvein on adaxial blade surfaces.

Selected specimen. VENEZUELA. Bolívar: Auyan-tepui, Ro Lomita camp, *Steyermark 93596* (K).

93. *Myrcia pubiflora* DC., Prodr. [de Candolle] 3: 249. 1828. *Aulomyrcia pubiflora* (DC.) O. Berg, Linnaea 27: 40. 1855. TYPE: Brazil. [Minas Gerais:] Minarum, Serro Frio, s.d., *C. F. P. Martius s.n.* (lectotype, designated here [likely holotype], M-0136896!; isolectotypes, G-DC!, P [3]!). [Species group C].

Aulomyrcia pohliana O. Berg in C. F. P. von Martius & auct. suc. (eds.), Fl. Bras. 14: 72. 1857. TYPE:

[Brazil.] Minas Gerais, s.d., *J. B. E. Pohl 1080* (holotype, B†; lectotype, designated here, W-0037132!; isolectotypes, F-0064755F!, K-000342674!, K-000342675!, W-0037133!).

Habitat and distribution. *Myrcia pubiflora* is distributed along the length of the Brazilian Atlantic Rainforest from Sergipe to Santa Catarina at altitudes of ca. 10–1500 m.

IUCN Red List category. *Myrcia pubiflora* is known to us from seven collections from Minas Gerais, Rio de Janeiro, and Santa Catarina in Brazil; it is, however, well represented in local herbaria available online (speciesLink, 2015). The EOO of this species is large enough to remove it from a category of threat; therefore, it is considered Least Concern (LC) according to IUCN criteria (2014).

Notes. The lectotype of *Aulomyrcia pohliana* at W bears the number 3058 in addition to the collection number and the serial number 31530 from the US negative set.

Selected specimens. BRAZIL. **Espírito Santo:** Linhares, Reserva Natural Vale do Rio Doce, proximo a estrada 154, talhão 506, *Lino 82* (K). **Minas Gerais:** Ouro Preto, Camarinhas, *Peron 685* (K). **Rio de Janeiro:** *Glaziou 10842* (K, US). **Santa Catarina:** Sanga da Areia, Sombrio, *Reitz 9657* (NY).

94. *Myrcia pudica* (McVaugh) E. Lucas & C. E. Wilson, comb. nov. Basionym: *Marlierea pudica* McVaugh, Brittonia 33: 35. 1981. TYPE: Venezuela. Bolívar: Cerro Guaiquinima, secto NO, entre los brazos NO del Rio Carapo, 30 May 1978, *J. A. Steyermark 117522* (holotype, MICH-1109598!; isotypes, F-0065393F!, VEN-128765!). [Species group B].

Habitat and distribution. *Myrcia pudica* was collected from stony, sandy plateau vegetation in Venezuela at an altitude of ca. 1000 m.

IUCN Red List category. *Myrcia pudica* is known to us only from the type available online and the one specimen cited below, which is collected from the same, unprotected vicinity. The Venezuelan tepuis have not been exhaustively botanized, but the Myrtaceae of the Guiana shield is relatively well known (McVaugh, 1958, 1969), leading us to believe this species may have a very restricted EOO (less than five locations). *Myrcia pudica* is assessed as Vulnerable (VU D2) according to IUCN criteria (2014).

Notes. *Myrcia pudica* is an extremely distinctive species with elliptic, straplike leaves, three or four calyx lobes, and two locules or “imperfectly three” (Steyermark, 1981). The reduced inflorescence suggests an affinity with McVaugh’s (1958) *Marlierea* sect. *Myrciopsis*.

Selected specimen. VENEZUELA. **Bolívar:** Heres, Meseta del Guaiquinima, Rio Carapo 8 km N del Salto Carapo, Huber 12399 (K, US).

95. *Myrcia pyrifolia* (Desv. ex Ham.) Nied., Nat. Pflanzenfam. 3(7): 76. 1893. Basionym: *Eugenia pyrifolia* Desv. ex Ham., Prodr. Pl. Ind. Occid., 44. 1825. *Aulomyrcia pyrifolia* (Desv. ex Ham.) O. Berg, Linnaea 27: 44. 1855. TYPE: Guyana, s.d., herb. Prof. Desv. s.n. (holotype, P-00725813!). [Species group D].

Aulomyrcia pyrifolia (Desv. ex Ham.) O. Berg var. *robusta* O. Berg, Linnaea 27: 44–45. 1854 [1855]. TYPE: [French Guiana.] Guiana Gallica. s.d., P. A. Poiteau s.n. (holotype, B†; lectotype, designated here, LE!).

Habitat and distribution. *Myrcia pyrifolia* is known from moist riverine forests of Venezuela, Guyana, Suriname, French Guiana, and Brazil at altitudes of ca. 300–600 m.

IUCN Red List category. *Myrcia pyrifolia* is a well-collected species known to us from 23 collections and 19 localities, with an EOO of ca. 550,000 km². *Myrcia pyrifolia* is considered of Least Concern (LC) according to IUCN criteria (2014).

Notes. The type collection of *Myrcia pyrifolia* has a strong resemblance to *M. amazonica* but with a convex to flat midvein on the adaxial blade surface. The outside of the ovary is densely white-pubescent and leaves are acuminate, which are characters that also differentiate *M. pyrifolia* from *M. amazonica*. McVaugh (1969) suggested affinities to *M. rufipila* and related species that are distinguished by internally pubescent calyx lobes. The calyx lobes in *M. pyrifolia* are internally glabrous as are those in *M. amazonica*. The lectotype of *Aulomyrcia pyrifolia* var. α *robusta* was not seen by McVaugh (1969) but has an impressed midvein, as does *M. amazonica* but not *M. pyrifolia*. For these reasons the varietal status of *M. pyrifolia* var. *robusta* should be tested. Berg (1855–1856) indicated “v. in hb. Kunth” for the type collection of the latter variety; the Kunth herbarium was subsumed into the herbarium at Berlin before the destruction of the latter.

Selected specimens. BRAZIL. **Pará:** Oriximiná, Igarapé Jaramacaru, campos de Ariramba, Martinelli 12268 (K, US). FRENCH GUIANA. Montagne du Mahury, Ile de

Cayenne, Descoings 20114 (CAY). GUYANA. Upper Canje River, betw. Digitima savanna, E Berbice-Corentyne, Gillespie 2587 (CAY). SURINAME. **Marowijne:** via secte ab Moengo tapoe ad Grote Zwiebelzwamp, Lanjouw 559 (K). **Sipaliwini:** Nassau, forest near Km. 8.2, Lanjouw 2666 (K).

96. *Myrcia quitarensis* (Benth.) Sagot, Ann. Sci. Nat., Bot., VI, 20: 184. 1885. Basionym: *Eugenia quitarensis* Benth., J. Bot. (Hooker) 2: 322. 1840. *Myrciaria quitarensis* (Benth.) O. Berg, Linnaea 27: 323. 1856. TYPE: [British Guiana.] Banks of the Rio Quitaro, 1838, R. Schomburgk 547 (lectotype, designated here [likely holotype], K000344106!; isoelectotypes, E-00394769!, F-0065291F!, F-0065292F!, F-0065293F!, G-00223836!, K-000344107!, L-0329642!, P-00163116!, P-00725816!, US-00048585!, W-0037141!). [Species group C].

Habitat and distribution. *Myrcia quitarensis* has been collected from riverbanks of southeastern Venezuela to Guyana (possibly also French Guiana), from an altitude not precisely known.

IUCN Red List category. The collection Larpin 632 (CAY not seen) records *Myrcia quitarensis* from French Guiana, extending its known distribution. Based on all available information, this species has a large EOO but a highly fragmented distribution, and it is rarely reported from otherwise well-collected areas. *Myrcia quitarensis* is assessed with possible status of Near Threatened (NT) according to IUCN criteria (2014).

Notes. *Myrcia quitarensis* has four calyx lobes and a convex to flat midvein on the adaxial leaf blade. The lectotypification process began in 1969 when McVaugh annotated the K sheet from Bentham’s herbarium as type and the remaining K sheet as isotype. McVaugh (1969) reported a resemblance of *M. quitarensis* to *M. pyrifolia* in his *Myrcia* sect. *Aulomyrcia* but assigns *M. quitarensis* to *Myrcia* sect. *Armeriela* as the hypanthium tears deeply at anthesis. Holst (2002) described a species with two pairs of unequal calyx lobes, a convex midvein, nearly glabrous flowers, and reddish, dibrachiate inflorescence trichomes; additional specimen citations are also provided.

Selected specimen. GUYANA. **Potaro-Siparuni:** Iwokrama Rainforest Reserve, Clarke 692 (U).

97. *Myrcia racemosa* (O. Berg) Kiaersk., Enum. Myrt. Bras. 72. 1893. Basionym: *Aulomyrcia racemosa* O. Berg, Linnaea 27: 52. 1855. TYPE: [Brazil.] Rio de Janeiro: Ilha de Governador, s.d., C. F. P. Martius 36 (lectotype, designated

here [likely holotype], BR-0000005280674!; isoelectotypes, K-000344110!, LE!). [Species group C].

Habitat and distribution. *Myrcia racemosa* is widespread, distinct, and well collected in the Brazilian Atlantic forests, and is found from southeastern Bahia to northern Santa Catarina, at altitudes of ca. 10–1600 m.

IUCN Red List category. Material of *Myrcia racemosa* available to us represents 69 collections from 48 localities with an EOO > 3 million km². *Myrcia racemosa* is assessed as Least Concern (LC) according to IUCN criteria (2014).

Notes. Berg's two syntypes of *Myrcia racemosa* present variable morphology. We take that with pubescent fruits and more open venation represented by *Martius* 36 as the more common form and lectotypify this collection, as opposed to *J. B. E. Pohl* 1091 (as Schott, W!). Future studies may delimit one or more species from within this interpretation of *M. racemosa*. In the sense considered here, *M. racemosa* is a distinctive species with coriaceous, open-veined leaves, and usually pubescent branchlets, petioles, and peduncles. An affinity with *M. micropetala* is suggested by the DNA-based study of Lucas et al. (2011); there is similarity in their impressed, looping venation and bristly gray or straw-colored hairs.

Selected specimens. BRAZIL. **Bahia:** Una, Estrada que liga São José com Una, a 17 km da BR 101, ca. de 45 km ao S de Itabuna, *Mori* 11895 (K). **Espírito Santo:** Estr. Rod. do Sol, 10 km depois de Guarapari, *de Lima* 2933 (K). **Minas Gerais:** Serra de Ibitipoca, *Sucre* 7378 (K). **Paraná:** Morretes, Est. Marumbi, *Hatschbach* 25367 (K, NY); Rio São Joãozinho, *Hatschbach* 40166 (NY). **Rio de Janeiro:** Restinga de Tijuca, *Sucre* 8042 (K). **Rondônia:** eixo da JP-14, ponto II, *Toledo* 201 (ESA). **Santa Catarina:** Mina Velha, Garuva, São Francisco do Sul, *Reitz* 4633 (US). **São Paulo:** Peropava, Faz. Boa Vista, *Catharino* 359 (ESA); Loteamento Maramba II, 6 km de Itanhaém em direção a Peruíbe, *Romão* 705 (ESA). **Sergipe:** Santa Luzia do Itanhi, ca. 2.5 km do Distr. Crasto, na estrada para Sta. Luzia do Itanhi, *Amorim* 1466 (NY).

98. *Myrcia racemulosa* DC., Prodr. [de Candolle] 3: 254. 1828. TYPE: [Brazil.] prov. Minarum, s.d., *C. F. P. Martius* s.n. (lectotype, designated here [likely holotype], M-0136833!; isoelectotypes, G-DC!, M-0136832!, M-0136834!, M-0136835!). [Species group C].

Myrcia imbricata Gardner in H. B. Fielding & G. Gardner, Sert. Pl., t. 75. 1844. TYPE: Brazil. Minas Gerais: Serra dos Araras, confines of Goyaz, s.d., *G. Gardner* 4646 (lectotype, designated here [likely holotype],

BM-0953613!; isoelectotypes, K-000343387!, K-000343388!).

Myrcia scutulifera DC., Prodr. [de Candolle] 3: 254. 1828. TYPE: [Brazil.] prov. Minarum, s.d., *C. F. P. Martius* s.n. (lectotype, designated here [likely holotype], M-0136832!; isoelectotype, G-DC!).

Habitat and distribution. *Myrcia racemulosa* is a species of the Central Brazilian cerrado and campo rupestre found from Bahia to Mato Grosso do Sul at altitudes of 500–1000 m.

IUCN Red List category. *Myrcia racemulosa* is an infrequent species known to us from the types and two further collections. Approximately 20 reliably named specimens available online (SpeciesLink, 2015) give an EOO > 500,000 km². *Myrcia racemulosa* is assessed as Least Concern (LC) according to IUCN criteria (2014), although its relative rarity may mean a detailed assessment would result in a higher category of threat.

Notes. *Myrcia racemulosa* has affinities with *M. myrtillifolia* but is distinct in its sessile, cordate leaves that clasp the stem and its consistently acute leaf tips. Individuals are usually lightly pubescent in contrast to *M. myrtillifolia*, which is mostly glabrous.

Selected specimens. BRAZIL. **Bahia:** Barreiras, Rodovia Barreiras–Brasília Km. 90, *Coradin* 7417 (K). **Goiás:** Caldas Novas, *Vieira* 1627 (K). **Minas Gerais:** Chapada dos Gaúchos, *da Silva* 109 (K).

99. *Myrcia ramuliflora* (O. Berg) N. Silveira, Roesslária 7: 66. 1985. Basionym: *Aulomyrcia ramuliflora* O. Berg in C. F. P. von Martius & auct. suc. (eds.), Fl. Bras. 14: 64. 1857. TYPE: [Brazil.] Bahia, s.d., *P. Salzmann* s.n. (holotype, B†; neotype, designated here, Brazil, Bahia, Salvador, Lagoa de abaeté, Salvador, 22 May 1981, *S. A. Mori* 14039, CEPEC 27425!; isoneotypes, MO-1709009!, NY-1522713!, RB-00264855!). [Species group C].

Myrcia sphenoides (O. Berg) Mattos, Lofegrenia 126: 3. 2008. Basionym: *Aulomyrcia sphenoides* O. Berg in C. F. P. von Martius & auct. suc. (eds.), Fl. Bras. 14: 63. 1857. TYPE: [Brazil.] Bahia: ad Soteropolin prov. Bahia, s.d., *Blanchet* 1825 (holotype, B†; lectotype, designated here, G-00222042!; isoelectotypes, BM-2!, BR-0000005238309, HAL-0089718!, P-05262132!).

Habitat and distribution. *Myrcia ramuliflora* is endemic to the restingas of Bahia at altitudes of 0–60 m.

IUCN Red List category. Approximately 40 authoritatively named specimens are available online (speciesLink, 2015) providing an EOO > 15,000

km². *Myrcia ramuliflora* is assessed as Least Concern (LC) according to IUCN criteria (2014).

Notes. Material cited of *Myrcia ramuliflora* on-line from Sergipe and Rio Grande do Norte are morphologically very different and likely of a separate taxon. *Myrcia ramuliflora* resembles *M. littoralis* but differs in the relative absence of trichomes (sparse trichomes on new branches only) and in having venation raised on both sides of the leaves. The need for a neotype arises from the destruction of the only apparent specimen of the Salzmann gathering. The neotype was selected as it is a good match for the protologue, was collected from a similar locality, and is widely available in disparate herbaria.

Selected specimens. BRAZIL. **Bahia:** Mata de São João, Praia do Forte, na beira da avenida de entrada, *Lima 412* (K); entre Rios, sudoeste do povoado de Subaúma, *França 1142* (HUEFS).

100. *Myrcia revolutifolia* McVaugh, Mem. New York Bot. Gard. 18: 121. 1969. TYPE: Venezuela. Amazonas: Serrania Yutaje, Rio Manapiare, Cerro Coro-Coro, 2 Mar. 1953, *B. Maguire 35462* (holotype, MICH-1109559!; isotypes, F-0065558F!, NY-00405472!, US-00117771!, VEN-75664!). [No species group assignment].

Habitat and distribution. *Myrcia revolutifolia* is known from sandy savanna and forest patches of southeastern Colombia to northern Brazil from altitudes between 600 and 2300 m.

IUCN Red List category. Collections of *Myrcia revolutifolia* available to us indicate that the species has an EOO of ca. 40,000 km² and has been frequently collected. *Myrcia revolutifolia* is assessed as Least Concern (LC) according to IUCN criteria (2014).

Notes. *Myrcia revolutifolia* is a shrub or small tree distinguished by five free, internally pubescent calyx lobes, revolute leaves, terminal bunches of asymmetrical, glabrous inflorescences with dark red, smooth branchlets and petioles, and by pale gray, lightly decorticating bark. Holst (2002) provided a detailed discussion and many additional specimen citations.

Selected specimens. VENEZUELA. **Amazonas:** Serrania Paru, SW sector, *Berry 4933* (K). **Bolívar:** Meseta del Jaua, Cerro Sarisarinama, *Steyermark 109176* (K).

101. *Myrcia riodocensis* G. M. Barroso & Peixoto, Acta Bot. Brazil. 4(2): 13. 1990. TYPE: [Brazil.] Espírito Santo: Linhares, 30 Jan. 1972, *D. Sucre*

8269 (lectotype, designated here, RB-00542159!; isoelectotypes, CVRD!, MBML not seen, RB-00662387!). [Species group D].

Habitat and distribution. *Myrcia riodocensis* is known from the high Atlantic rainforest of eastern Brazil in Espírito Santo at an altitude of ca. 30 m.

IUCN Red List category. *Myrcia riodocensis* was assessed as Critically Endangered (CR) by Martinelli and Moraes (2013) according to IUCN criteria (2014).

Notes. The protologue affiliates *Myrcia riodocensis* with *Myrcia* sect. *Aulomyrcia*, and we take this to mean sensu Grisebach (1864). The type specimen has a channeled midvein on the adaxial leaf blade and a pyramidal inflorescence with asymmetrical branching. Bracts are absent; the plant appears glabrous and has peeling bark. These are characters that we associate with *M. amazonica*. *Myrcia riodocensis* differs, however, in its distinctive, 4-lobed calyx and reduced inflorescence.

Selected specimen. BRAZIL. **Espírito Santo:** Linhares, Reserva Nat. CVRD, Estrada Aceiro de Viveiro, *Folli 3197* (K).

102. *Myrcia rotundata* (Amshoff) McVaugh, Mem. New York Bot. Gard. 18: 122. 1969. Basionym: *Aulomyrcia rotundata* Amshoff, Recueil Trav. Bot. Néerl. 42: 8. 1950. TYPE: British Guiana [Guyana.] Kaieteur savanna, 4 Sep. 1937, *C. I. Sandwith 1348* (holotype, MICH-1109558!; isotypes, K-000344205!, NY-00386683!, U-0061928!, US-00005294!). [Species group B].

Habitat and distribution. *Myrcia rotundata* has been collected from the Guyana shield savanna on rocky ground in Venezuela to Guyana from an altitude of ca. 366 m.

IUCN Red List category. *Myrcia rotundata* is known to us from three collections from three distinct localities. Given these, plus the material studied by McVaugh (1969), this suggests an EOO of at least 45,000 km². To our knowledge, *M. rotundata* has not been collected since Steyermark's 1964 expedition, suggesting a possible subsequent decline; therefore, it is assessed as Vulnerable (VU) according to IUCN criteria (2014).

Notes. *Myrcia rotundata* is a tetramerous species with two locules per ovule that resemble those of other small, round-leaved, montane species in *Myrcia* sect. *Aulomyrcia*. Amshoff (1950) suggested an

affinity of this species with others here grouped as species group B. Santos (2014) found a sample of *M. rotundata* to emerge outside the *Myrcia* sect. *Aulomyrcia* clade; however, this accession does not match the type collection.

Selected specimens. GUYANA. **Cuyuni-Mazaruni:** *Pipoly* 7719 (K). VENEZUELA. **Bolívar:** Oso Woods Camp, Rio Churun. Auyan-tepui, *Steyermark* 93197 (K).

103. *Myrcia rubiginosa* Cambess., Fl. Bras. Merid. 2: 300. 1832. TYPE: Brazil. Rio de Janeiro, 1816–1821, A. F. C. Saint-Hilaire s.n. (lectotype, designated here [likely holotype], P-00161371!; isoelectotypes, MPU-010964!, P-00161369!, P-00161370!). [Species group D].

Myrcia pyramidata O. Berg in C. F. P. von Martius & auct. suc. (eds.), Fl. Bras. 14: 193. 1857. TYPE: [Brazil.] Rio de Janeiro, s.d., F. Sellow s.n. (holotype, B†; lectotype, designated here, K-000262404!; isoelectotypes, BR-0000005238545!, P-00161139!, W-0037074!).

Habitat and distribution. *Myrcia rubiginosa* was collected from the Atlantic forest of Rio de Janeiro, Brazil; its altitude is not precisely known.

IUCN Red List category. *Myrcia rubiginosa* is known to us from three 19th century collections in addition to the type. All collections were from unspecified forests in Rio de Janeiro under extreme threat. This species is assessed as Vulnerable (VU D2) according to IUCN criteria (2014). *Myrcia rubiginosa* is morphologically similar to *M. amazonica*, and, if conspecific, the EOO would be large enough to obviate environmental threat. Further study is required.

Selected specimen. BRAZIL. **Rio de Janeiro:** *Miers* 4435 (K).

104. *Myrcia rufipila* McVaugh, Mem. New York Bot. Gard. 18: 104. 1969. Replaced name: *Aulomyrcia divaricata* O. Berg, Linnaea 27: 58. 1855, non *Myrcia divaricata* (O. Berg) Lemée in Fl. Guyane Franç. 3: 146. 1954, nom. illeg. TYPE: Suriname. Upper Suriname River, Oct. 1844, A. Kappler 1702 (lectotype, designated here, W-0033247!; isoelectotypes, G-00222573!, G-00222574!, JE-00000830!, LE-00007059!, MICH-1109835!, MO-313556!, P-00551593!, P-00551594!, P-00551595!, U-0102923!, W-0037123!). [Species group C].

Habitat and distribution. *Myrcia rufipila* is known from river and coastal regions and moist

lowland forests of Amazonian Brazil, Guyana, and Suriname, from altitudes of ca. 70–300 m.

IUCN Red List category. *Myrcia rufipila* is known to us from 10 collections from eight localities; this species is unexpectedly widespread relative to the number of collections, with an EOO of ca. 900,000 km². *Myrcia rufipila* is assessed as Least Concern (LC) according to IUCN criteria (2014).

Notes. McVaugh (1969) treated *Myrcia rufipila* in *Myrcia* sect. *Armeriela* and suggested an affinity to other species with internally pubescent calyx lobes and impressed midveins such as *M. subobliqua*. McVaugh (1969) also suggested an affinity to *M. pyrifolia*, but that species has internally glabrous calyx lobes.

Selected specimens. BRAZIL. **Amapá:** Serra do Navio, next to village in area prepared for mining, *Rabelo* 3156 (K, US). **Amazonas:** Reserva Flor. Adolfo Ducke, Manaus–Itacoatiara, Km. 26, *Souza* 412 (K). **Pará:** Fordlândia, Tapajós River Region, *Krukoff* 1041 (K); Ilha do Algodoal, Rochina, *Bastos* 1377 (K). **Roraima:** Boa Vista, foothills of Serra Tepequém, near Igarapé Paparu, *Prance* 4367 (K, US). GUYANA. Cuyuni-Mazaruni, Mazaruni Station, *Forest Department of British Guiana* 672 (K).

105. *Myrcia rugosior* (McVaugh) E. Lucas & C. E. Wilson, comb. nov. Basionym: *Marlierea rugosior* McVaugh, Mem. New York Bot. Gard. 18: 67. 1969. TYPE: Venezuela. Bolívar: Auyan-tepui near summit of central part of NW arm, 7 May 1964, J. A. Steyermark 93545 (holotype, MICH-1109597!; isotype, VEN-72165!). [Species group E].

Habitat and distribution. *Myrcia rugosior* was collected near the summit of the central part of the northwest arm of the Auyan tepui, in *Bonnetia* Mart. (Clusiaceae) forest, in Venezuela (Bolívar), at an altitude of ca. 1800 m.

IUCN Red List category. *Myrcia rugosior* is known to us only from the type and one other collection, *Holst* 3820 (MO not seen), which was collected from the same altitude in Bolívar. We find no evidence of environmental protection in this area. While the Venezuelan tepuis have not been vigorously botanized, the Myrtaceae of the Guiana shield are relatively well known (McVaugh, 1958, 1969), leading us to believe that *M. rugosior* may have a very restricted distribution, with known locations five or fewer. The species is assessed as Vulnerable (VU D2) according to IUCN criteria (2014).

Notes. *Myrcia rugosior* has been described as a tree to 5 m. Based on the limited material available, this species appears to fit the characteristics of *Rubachia* (sensu Berg), with an almost completely fused calyx tearing deeply to the summit of the ovary. Holst (2002) mentions *M. rugosior* in the context of *M. bonnetiasylvestris* (Steysm.) Steysm. and *M. sipapensis* McVaugh, species not included in *Myrcia* sect. *Aulomyrcia*.

106. *Myrcia rupta* M. L. Kavas. & B. Holst, Brittonia 46: 141. 1994. TYPE: French Guiana. Saul: Crique Kapiri, bassin de l'Approuague, 14 Jan. 1991, G. Cremers 11606 (holotype, U-0005148!; isotypes, ASU-0019294!, CAY!, MO-313555!, NY-00074077!, P not seen, US-00660061!). [Species group C].

Habitat and distribution. *Myrcia rupta* is an understory species from the low-altitude moist forest of French Guiana at altitudes of ca. 40–550 m.

IUCN Red List category. *Myrcia rupta* is endemic to central French Guiana but common within its range. *Myrcia rupta* is known to us from 30 collections from 15 localities and has an EOO > 165,000 km². The species is assessed as Least Concern (LC) according to IUCN criteria (2014).

Notes. *Myrcia rupta* has asymmetrical panicles reduced to appear almost racemose, many persistent pointed bracts, a looping intramarginal vein, and a channeled midvein. Kawasaki and Holst (1994) give a clear account of their decorticans complex in the protologue of this species and justify their description of a species with a tearing calyx in *Myrcia*.

Selected specimen. FRENCH GUIANA. Saul, Vers la Crique Limonade, de Granville 2346 (K).

107. *Myrcia salticola* (Steysm.) McVaugh, Mem. New York Bot. Gard. 18: 123. 1969. Basionym: *Aulomyrcia salticola* Steysm., Fieldiana, Bot. 28: 1007. 1957. TYPE: [Venezuela.] Bolívar: Salto Iwaracaru-meru, Sororopan-tepui, 15 Nov. 1944, J. A. Steysmark 60213 (holotype, F-0064766F!; isotypes, NY-00386684!, U-0005149!, US-00048591!, VEN-37427!). [Species group D].

Habitat and distribution. *Myrcia salticola* is endemic to the waterfalls of the Sororopan-tepui of Venezuela (Bolívar); it is found at an altitude of ca. 1600 m.

IUCN Red List category. *Myrcia salticola* is known only from the type collection from a relatively poorly known and collected area; we find no evidence of environmental protection. This species appears to have an extremely restricted EOO. There are few direct threats to the higher-altitude vegetation of the Tepuis; however, fire is a source of stochastic threat to endemic species (EOE, 2015). *Myrcia salticola* is assessed as Vulnerable (VU D2) according to IUCN criteria (2014).

Notes. The protologue of *Myrcia salticola* reports resemblance to *M. tomentosa*, and there is some similarity of leaf shape and texture. However, fruiting calyces in the type material are not star-shaped or reflexed as in the species of, and those related to, *M. tomentosa*. With a slightly raised midvein and hairy pyramidal panicle, this species resembles those hypothesized to have an affinity with *M. amazonica*.

108. *Myrcia santateresana* Sobral, Novon 20: 340. 2010. TYPE: Brazil. Espírito Santo: Santa Teresa, São Lourenço, Reserva Biol. São Lourenço, trilha do Caravagem, 3 Feb. 1999, L. Kollmann 1793 (holotype, MBML!; isotype, BHCB). [Species group D].

Habitat and distribution. *Myrcia santateresana* is endemic to the higher-altitude forests of Espírito Santo, Santa Teresa, at altitudes of ca. 750–850 m.

IUCN Red List category. *Myrcia santateresana* is calculated in the protologue as being Endangered (EN) according to IUCN criteria (2014).

Notes. The protologue of *Myrcia santateresana* states affinities with *M. badia*, differentiating *M. santateresana* in having smaller leaves, differing venation, smaller flowers, and no calyx tube. *Myrcia santateresana* has paired, decussate, long, loose, terminal inflorescences. The species has five calyx lobes and a channeled midvein; the discoloured, paler venation on otherwise dark brown drying leaves is reminiscent of *M. pyrifolia*.

109. *Myrcia saxatilis* (Amshoff) McVaugh, Mem. New York Bot. Gard. 18: 105. 1969. Basionym: *Aulomyrcia saxatilis* Amshoff, Recueil Trav. Bot. Néerl. 39: 154. 1942. TYPE: Suriname. Lucie River, 14 May 1926, G. Stahel 7048 (holotype, U-0132341!; isotype, MO-313552!). [Species group C].

Habitat and distribution. *Myrcia saxatilis* is recorded from rocky soils of higher-altitude savannas

and associated forests of Brazil (Amazonas), French Guiana, and Suriname at altitudes of ca. 50–1200 m.

IUCN Red List category. *Myrcia saxatilis* is known to us from fewer than 40 collections from 26 localities and has an EOO > 280,000 km². *Myrcia saxatilis* is assessed as Least Concern (LC) according to IUCN criteria (2014).

Notes. *Myrcia saxatilis* is a widespread and well-collected species that resembles *M. inaequiloba* but differs in having smaller, rounder leaves and corky petioles.

Selected specimens. BRAZIL. **Amazonas:** Barcelos, base of Serra Araca, 0–3 km S of Central Massif, 3 km E of Rio Jauari, *Prance 28889* (K). FRENCH GUIANA. Montagne des Nouragues, bassin de l'Approuague, *Larpin 509* (CAY). SURINAME. **Sipalwini:** Blanche Marie Waterfall on Nickerie River, *Evans 2489* (K).

110. *Myrcia scytophylla* (Diels) E. Lucas & C. E. Wilson, comb. nov. Basionym: *Marlierea scytophylla* Diels, Verh. Bot. Vereins Prov. Brandenburg 48: 187. 1906 [1907]. TYPE: [Brazil.] Amazonas: Rio Negro, São Joaquim, Jan. 1902, *E. H. G. Ule 6044* (holotype, B†; lectotype, designated here, G-00222983!; isoelectotype, F-0044415F!). [Species group C].

Habitat and distribution. *Myrcia scytophylla* is known from southern Venezuela, Brazil (Amazonas) to Peru, from an altitude of ca. 140 m.

IUCN Red List category. *Myrcia scytophylla* is a rare species known to us only from the type collection. Three further authoritatively named collections are available online (speciesLink, 2015), which give an EOO > 200,000 km². The species is assessed as Least Concern (LC) according to IUCN criteria (2014).

Notes. The only known duplicate of the type of *Myrcia scytophylla* is at G. It is lectotypified over the holotype fragment at F as it is a more representative sample. In the protologue for *Marlierea scytophylla*, Diels described a partially closed calyx in the bud, similar to that of *Marlierea* sect. *Eugeniopsis* Nied., all species of which that were included in the molecular analysis of Lucas et al. (2011: fig. 1) emerging in a single clade (clade 2). In our opinion, the raised midvein of the adaxial leaf surface and the asymmetric inflorescences place this species in *Myrcia* sect. *Aulomyrcia*. Holst (2002) provided further description and suggested an unqualified affinity to *M. grandis*.

111. *Myrcia sessiliflora* McVaugh, Mem. New York Bot. Gard. 18: 105. 1969. TYPE: Venezuela. Amazonas: Cerro Sipapo (Paráque), 20 Dec. 1948, *B. Maguire 27792* (holotype, MICH-1109551!; isotype, NY-00405476!). [Species group B].

Habitat and distribution. *Myrcia sessiliflora* occurs on stream banks, wet cliffs, and precipitous eastern slopes in Amazonas, Venezuela, at altitudes of ca. 1400–1800 m.

IUCN Red List category. *Myrcia sessiliflora* is known only from the two collections cited here, from a very poorly collected area that is also protected, in the Sipapo Forest Reserve (WDPA, 2015). *Myrcia sessiliflora* is assessed as Data Deficient (DD) according to IUCN criteria (2014).

Notes. The fruits of *Myrcia sessiliflora* are almost entirely sessile with a silky pubescence and a circular scar from the hypanthium; superficially, they resemble fruits of the genus *Plinia*. McVaugh (1969) described a folded embryo in this species, confirmed from the isotype at NY. McVaugh cited an affinity of *M. sessiliflora* with 4-merous montane species, such as *M. saxatilis*, in the protologue. We find, however, that the species resembles *M. caudata* and shares a (in this case completely) reduced inflorescence with other species of *Marlierea* sect. *Myrciopsis* (McVaugh, 1958).

Selected specimen. VENEZUELA. **Amazonas:** Cerro Sipapo (Paráque), W Peak, *Maguire & Politi 27908* (MICH).

112. *Myrcia skeldingii* Proctor, Rhodora 60: 325. 1959. TYPE: Jamaica. Parish of Clarendon: Mason River Savannah, 2.75–3 mi. NW of Kellits, 14 Oct. 1957, *G. R. Proctor 16478* (holotype, IJ-19896!; isotypes, A!, US-00117772!, US-00997541!). [Species group B].

Habitat and distribution. *Myrcia skeldingii* is endemic to the Mason River Savannah, Jamaica, at an altitude of ca. 700 m.

IUCN Red List category. *Myrcia skeldingii* is apparently dioecious; this distinctive species is known from two collections (four specimens) from the single Mason River locality, hence a very restricted AOO. The Mason River Savannah is under threat from farming and invasive species, but the type locality falls within the Mason River Reserve. *Myrcia skeldingii* has not been recollected since 1965 and has been considered to be Extinct (EX) (Kelly, 1998) according to IUCN criteria (2014).

Notes. The protologue of *Myrcia skeldingii* mentions an affinity with *M. uberavensis* O. Berg; however, we find much more resemblance to *M. cana* and *M. platyclada*. *Myrcia skeldingii* has subsessile, coriaceous, revolute leaves with flat to gently channeled midveins and dark petioles. The inflorescences are terminal, thick, darkened cymose panicles with flattened rachises and terminal bunches of buds. Buds are turbinate with short calyx lobes that tear the hypanthium into four or five irregularly sized lobes. Fruits resemble continental species with a tubular hypanthial remaining on the fruit.

113. *Myrcia skortzoviana* (Mattos) E. Lucas & C. E. Wilson, comb. nov. Basionym: *Marlierea skortzoviana* Mattos, Loefgrenia 54: 1. 1971, replacement name for *Marlierea subulata* Mattos, Ci & Cult. 19: 332. 1967, nom. illeg., non *Marlierea subulata* McVaugh, Fieldiana, Bot. 29: 177. 1956. TYPE: Brazil. São Paulo: Paranapiacaba, Estação Biológica (via ferrea São Paulo–Santos), s.d., J. R. Mattos 11839 (holotype, SP-80782!). [No species group assignment].

Habitat and distribution. *Myrcia skortzoviana* is found in the mountainous forests of High Serra Paranapiacaba, São Paulo, Brazil, at an altitude of ca. 800 m.

IUCN Red List category. *Myrcia skortzoviana* appears to have a very restricted EOO, and although it was collected in an ecological station, the level of legislation is low; ca. 250 km² of the reserve was destroyed in 1970 for construction of a highway. This species is assessed as Vulnerable (VU D2) according to IUCN criteria (2014).

Notes. *Myrcia skortzoviana* is known to us from the image of the holotype. The species has an incompletely closed calyx in bud; the inflorescence is reduced to distinctive, short, lateral, few-flowered panicles, described in the protologue as simple dichasia. The reduced inflorescence of this species as well as the manner of tearing of the calyx deep into the hypanthium suggests its placement in *Myrcia* sect. *Aulomyrcia*.

114. *Myrcia speciosa* (Amshoff) McVaugh, Mem. New York Bot. Gard. 18: 106. 1969. Basionym: *Aulomyrcia speciosa* Amshoff, Recueil Trav. Bot. Néerl. 42: 5. 1950. TYPE: British Guiana [Guyana.] 115 m Bartica–Potaro Rd., 24 Jan. 1943, D. B. Fanshawe 3836 (holotype, K-000344368!; isotype, U-0008496!). [Species group A].

Habitat and distribution. *Myrcia speciosa* occurs in rocky places on lateritic soil and wet dense forests in Cuyuni-Mazaruni, Guyana, at an altitude of ca. 100 m.

IUCN Red List category. *Myrcia speciosa* is known from three collections, suggesting a small population. This area of Guyana is not well collected, making it difficult to speculate on population size. *Myrcia speciosa* occurs in remote, unprotected primary vegetation under low-level threat from small-scale mining (EOE, 2015); it may be vulnerable to stochastic change. It is assessed as Vulnerable (VU D2) according to IUCN criteria (2014).

Notes. Amshoff (1950) and McVaugh (1969) commented on the difficulty in deducing the relationships of this very distinct and rare species. We tentatively suggest an affinity between *Myrcia speciosa* and other species with raised midveins and terminal inflorescences.

Selected specimen. GUYANA. **Potaro-Siparuni:** Mahdia R., Potaro R., 107 mi. Bartica–Potaro Rd., 8 Jan. 1943, Forest Department of British Guiana 3722 (K).

115. *Myrcia stictophylla* (O. Berg) N. Silveira, Roessléria 7: 66. 1985. Basionym: *Aulomyrcia stictophylla* O. Berg in C. F. P. von Martius & auct. suc. (eds.), Fl. Bras. 14 (1): 67. 1857. TYPE: [Brazil.] Rio de Janeiro, s.d., F. Sellow s.n. (holotype, B†; lectotype, designated here, P-00798925!; isolectotypes, F-0064771F!, K-000344395!, LE!, P-00161078!, P-00161079!). [No species group assignment].

Habitat and distribution. *Myrcia stictophylla* occurs in the coastal cordillera region of the Atlantic forests of Brazil at an altitude of ca. 30 m.

IUCN Red List category. We presume this species, known from few collections, to have a very restricted population. The species occurs in an ecological station of the Atlantic forest; environmental protection exists but is not strictly enforced. The threats to this biome are many; if legislation was to change, specific threat would be immediate. *Myrcia stictophylla* is assessed as Vulnerable (VU D2) according to IUCN criteria (2014).

Notes. *Myrcia stictophylla* is a poorly known and little-collected species. The material available indicates a species with consistently acuminate leaf tips and terminal inflorescences with thickened rachises.

Myrcia stictophylla has been compared to *M. gilsoniana*; see note under that species.

Selected specimen. BRAZIL. **São Paulo:** Iguape, Estação Ecol. Jureia-Itatins, Trilha para o Pocinho, *Costa* 64 (K).

116. *Myrcia subobliqua* (O. Berg) Nied., Nat. Pflanzenfam. 3(7): 76. 1893. Basionym: *Aulomyrcia subobliqua* O. Berg, Linnaea 27: 57. 1855. TYPE: [Guyana] British Guiana. Piarra ad al flumen Essequibo, s.d., *R. Schomburgk* 597 (holotype, B†; lectotype, designated here, K-000344434!; isoelectotypes, BM!, BR-0000005289080!, E-00394773!, F-0065330F!, F-0065331F!, F-0065332F!, GH-00069397!, K-000344436!, MICH-1109627!, NY-00405028!, P-00552202!, P-00552600!, US-00048581!). [Species group C].

Habitat and distribution. *Myrcia subobliqua* occurs on river margins of low-altitude, ombrophilous forest, reported from Guyana, Suriname, French Guiana, and Brazil from altitudes of ca. 10–180 m.

IUCN Red List category. *Myrcia subobliqua* is a well-collected species with an EOO > 130,000 km². It is assessed as Least Concern (LC) according to IUCN criteria (2014).

Notes. *Myrcia subobliqua* is a larger-leaved (to 20 cm) species associated with *M. pyrifolia* by McVaugh (1969), despite his classification of them in separate sections. The inflorescence of *M. subobliqua* comprises large, mostly regular triangular panicles in terminal and subterminal leaf axes. Leaf midveins are raised, and calyx lobes are pubescent within. This species is newly recorded from Brazil.

Selected specimens. BRAZIL. **Amapá:** rd. betw. Calcoene & Oiapoque (BR-156) 7 km SSE of Oiapoque, *Rabelo* 2870 (K). **Roraima:** 1843, *Schomburgk* 386 (K). GUYANA. **Cuyuni-Mazaruni:** Essequibo River betw. Omai & Dennison Mine, *Gillespie* 1431 (K). **Takutu-Upper Essequibo:** 5 km upstream from Kurupukari, right bank, *Pennington* 374 (K). SURINAME. **Sipaliwini:** N side of Kuruni Island, 30 km E of confluence on Corantijn River, *Evans* 1928 (K).

117. *Myrcia suborbicularis* (McVaugh) E. Lucas & C. E. Wilson, comb. nov. *Marlierea suborbicularis* McVaugh, Mem. New York Bot. Gard. 10(1): 88. 1958. TYPE: Venezuela. Amazonas: Rio Guainia, in sabanita 1 km E of Maroa, 25 Nov. 1953, *B. Maguire* 36400 (holotype, MICH-1109460!; isotypes, F-0065398F!, US-00036834!, VEN-41600!). [Species group B].

Habitat and distribution. *Myrcia suborbicularis* is endemic to Venezuela (Amazonas) and is associated with waterways in low forests on white sandy savanna at an altitude of ca. 110 m.

IUCN Red List category. Known to us only from the type collection but with seven further authoritatively identified species listed online (TROPICOS®, 2015), this species has an EOO of ca. 14,000 km² and is known from less than 10 localities, both criteria giving this species a Vulnerable category according to the IUCN criteria (2014). However, the collection localities lie within the Guianan and Negro-Branco moist forest ecoregions (WWF, 2014) that are under relatively low threat (EOE, 2015). Therefore, *Myrcia suborbicularis* does not completely fulfill criterion B of the IUCN (2014) and is assessed as Least Concern (LC).

Notes. *Myrcia suborbicularis* is a shrubby species with rounded, subsessile leaves, flattened rachises, and cymose inflorescences. The protologue states that there is an affinity with *M. neomontana* and that *M. suborbicularis* has three to five ovules per locule, which is unusual for *Myrcia* sect. *Aulomyrcia*.

118. *Myrcia subulata* (McVaugh) E. Lucas & C. E. Wilson, comb. nov. Basionym: *Marlierea subulata* McVaugh, Fieldiana, Bot. 29: 177. 1956. TYPE: Peru. Loreto: Mishuyacu, near Iquitos, May 1930, *G. Klug* 1341 (holotype, F-0040044F!; isotypes, NY-00405305!, US-00036833!). [No species group assignment].

Habitat and distribution. *Myrcia subulata* has been collected from river margins of low-altitude, ombrophilous forest from southern Venezuela to Bolivia at an altitude of ca. 100 m.

IUCN Red List category. *Myrcia subulata* is a well-collected species with an EOO > 900,000 km². *Myrcia subulata* is assessed as Least Concern (LC) according to IUCN criteria (2014).

Notes. *Myrcia subulata* resembles *M. fusca* from Panama with its subcordate, large (to ca. 30 cm) leaves with channeled midveins adaxially and terminal inflorescences with long opposite axes (not whorled); it differs from *M. fusca* in having less bullate, larger leaves. Holst (2002) provided further description and many additional specimen citations.

Selected specimens. BOLIVIA. **Pando:** W bank of Río Madeira, 2 km above Riberão Forest, *Prance* 6480 (K). BRAZIL. **Amazonas:** Rio Curuquete, halfway betw. Cachoeira São Paulo & República, *Prance* 14509 (K).

Rondônia: N bank of Rio Abuna, betw. cachoeira Tres S & Fortaleza, 4–16 km above mouth, *Prance 6168* (K). PERU. **Loreto:** Maynas, Quebrada Santa Cruz, *Vasquez 2959* (K); along the Ucalayi River, ca. 7 km SW of Jenaro Herrera village, Zone de Lobillo, near Nuevo Aucayacu, *Kvist 1039* (K).

119. *Myrcia sucrei* (G. M. Barroso & Peixoto) E. Lucas & C. E. Wilson, comb. nov. Basionym: *Marlierea sucrei* G. M. Barroso & Peixoto, Acta Bot. Brasil. 4(2): 15. 1990. TYPE: [Brazil.] Espírito Santo: Linhares, 31 Jan. 1972, *D. Sucre 8320* (holotype, CVRD not seen; isotypes, NY-01546322!, RB-00542137!, RBR not seen). [Species group E].

Habitat and distribution. *Myrcia sucrei* is found in the Atlantic forest of eastern Brazil from tabuleiro vegetation (from southeastern Bahia, Espírito Santo) at altitudes of ca. 0–500 m.

IUCN Red List category. *Myrcia sucrei* has an EOO > 900,000 km², which is sufficient to avoid a category of threat. The species is protected in the Vale do Rio Doce reserve in Espírito Santo. *Myrcia sucrei* is assessed as Least Concern (LC) according to IUCN criteria (2014).

Notes. *Myrcia sucrei* has large, leathery leaves with a convex midvein above. The inflorescence is made up of multiple terminal spikes that bear sessile flowers. The axes of the inflorescence, the bracts, and the external surfaces of flowers are covered in long, golden hairs. Large (to 3 mm), pubescent bracts subtend every flower; the flowers are internally glabrous.

Selected specimens. BRAZIL. **Bahia:** Km. 17 da estrada que liga a Rod. BR 101 (São Jose) a Rod. BA-215, *Mori 11723* (K). **Espírito Santo:** Linhares, Comp. Vale do Rio Doce, estrada Mantegueira, Res. Linhares, *Lucas 840* (K).

120. *Myrcia tetraphylla* Sobral, J. Bot. Res. Inst. Texas 4: 152. 2010. TYPE: Brazil. Southern Bahia: Ilhéus, Una, 26 Aug. 1993, *J. Jardim 265* (holotype, CEPEC58815 not seen; isotypes, NY-00615552!, RB-00314569!). [Species group A].

Habitat and distribution. *Myrcia tetraphylla* is known from the rainforests of coastal Bahia at altitudes of ca. 0–100 m.

IUCN Red List category. The protologue of *Myrcia tetraphylla* (Sobral, 2010) assessed it as Endangered (EN) according to IUCN criteria (2014).

Notes. The protologue (Sobral, 2010) of *Myrcia tetraphylla* stated affinities with *M. clavija* and *M. eumecephylla* based on leaf disposition. This species was differentiated in having petioles to 20 mm, leaf bases attenuate, and fruit to 22 mm in diameter; the calyx lobes were not aristate.

Selected specimen. BRAZIL. **Bahia:** Ilhéus, Estrada entre Sururu e Vila Brasil, a 6–14 km de Sururo, a 12–20 km SE de Buerarema, *Mori 12887* (K).

121. *Myrcia umbraticola* (Kunth) E. Lucas & C. E. Wilson, comb. nov. Basionym: *Myrtus umbraticola* Kunth in F. W. H. A. von Humboldt, A. J. A. Bonpland & C. S. Kunth, Nov. Gen. Sp. 7: 258. 1825. *Marlierea umbraticola* (Kunth) O. Berg in C. F. P. von Martius & auct. suc. (eds.), Fl. Bras. 14: 35. 1857. TYPE: [Brazil. Amazonas:] Maypures, s.d., F. W. H. A. Von Humboldt & Bonpland s.n. (holotype, P-00679482!). [Species group C].

Habitat and distribution. *Myrcia umbraticola* is known from forests and shady riverbanks of the Orinoco and Casiquiare Rivers of Colombia and Venezuela into Amazonian Brazil at altitudes of ca. 100–140 m.

IUCN Red List category. *Myrcia umbraticola* has an EOO > 1 million km². *Myrcia umbraticola* is assessed as Least Concern (LC) according to IUCN criteria (2014).

Notes. *Myrcia umbraticola* is a widely distributed and well-collected species that appears to comprise multiple entities. The type specimen is sterile but shows a larger-leaved, brown-drying species with open blade venation and smooth petioles. Herbarium material of a separate entity attributed to this name has smaller (no more than 5 cm), discoloured leaves with finer, closed secondary venation to the blades; petioles are often corky (e.g., *Cid 4066*, K). Future studies may support this as a separate species. Calyx lobes are internally pubescent on both forms.

Selected specimens. BRAZIL. **Amapá:** betw. Calcoene & Oiapoque, 110 km NW of Calcoene, *Rabelo 2940* (K). **Amazonas:** Rio Abacaxia, igarapé Cuera, *Cid 4066* (K); Reserva Flor. Ducke, Manaus–Itacoatiara, Km. 26, *de Souza 110* (K). **Pará:** Jari, Estrada entre Planalto A e Braco, *Silva 1835* (K). GUYANA. Upper Takutu–Upper Essequibo, *Clarke 3605* (U). VENEZUELA. In Vasurie, *Spruce 3316* (K).

122. *Myrcia uniflora* (McVaugh) E. Lucas & C. E. Wilson, comb. nov. Basionym: *Marlierea uniflora* McVaugh, Mem. New York Bot. Gard. 18:

69. 1969. TYPE: Venezuela. Amazonas: Río Guiana, 14 Oct. 1957, *B. Maguire 41888* (holotype, MICH-1109452!; isotypes, NY-00405311!, S-052574!, US-00117795!, VEN-76123!). [No species group assignment].

Habitat and distribution. *Myrcia uniflora* is known from savanna regions of southern Venezuela into northern Brazil at altitudes of ca. 20–140 m.

IUCN Red List category. *Myrcia uniflora* is known to us only from the type collection. Authoritatively named specimens online (TROPICOS®, 2015) have been collected from an area that suggests an EOO of ca. 20,000 km² within the Negro Branco ecoregion (WWF, 2014) that is under relatively low environmental threat. The species is assessed as Least Concern (LC) according to IUCN criteria (2014).

Notes. *Myrcia uniflora* is a poorly known species but one that is distinctive in having uniflorous inflorescences. The flowers are closed in bud and tear open into three to four reasonably equal calyx lobes. McVaugh (1969) noted a similarity to small-leaved *Marlierea* and *Calyptranthes* with bicarinate branchlets. This species may be affiliated with those of *Marlierea* sect. *Myrciopsis* (McVaugh, 1958). Holst (2002) provided further description and additional specimen citations.

Selected specimen. BRAZIL. **Amazonas:** São Gabriel da cachoeira, Rio Cubate, afluente do Içana, *Farney 1886* (K).

123. *Myrcia ventuarensis* (B. Holst) E. Lucas & C. E. Wilson, comb. nov. Basionym: *Marlierea ventuarensis* B. Holst, *Selbyana* 23: 152. 2002. TYPE: Venezuela. Amazonas: Atabapo, Cerro Moriche, Oct. 1989, *L. Delgado 893* (holotype, PORT-65583!; isotypes, NY not seen, SEL-003101!, VEN-211655!). [Species group B].

Habitat and distribution. *Myrcia ventuarensis* has been collected from shrubby savannas or scrub forests in southern Venezuela at altitudes of 200–350 m.

IUCN Red List category. *Myrcia ventuarensis* is known only from the type and one further authoritatively named specimen (TROPICOS®, 2015) from the Rio Ventuari. These sites form part of the Negro Branco moist forest ecoregion, said to be under low environmental threat due to its inaccessibility (WWF,

2014). The species is assessed as Data Deficient (DD) according to IUCN criteria (2014).

Notes. Holst (2002) suggested an unqualified affinity of *Myrcia ventuarensis* with *M. neoschomburgkiana* but distinguishes the former species on the basis of its shallowly sulcate (vs. raised) midveins, mostly elliptic (vs. obovate) blades, and impressed-punctate (vs. not impressed-punctate) adaxial leaf surfaces.

124. *Myrcia zetekiana* (Standl.) B. Holst, *Novon* 15: 296. 2005. Basionym: *Eugenia zetekiana* Standl., *J. Wash. Acad. Sci.* 15: 286. 1925. *Aulomyrcia zetekiana* (Standl.) Amshoff, *Ann. Missouri Bot. Gard.* 45: 170. 1958. TYPE: Panama. Canal Zone: in wet forest on hills N of Frijoles, 19 Dec. 1923, *P. C. Standley 27503* (holotype, US-00008153!; isotypes, BM-000645689!, K-000261052!). [Species group A].

Habitat and distribution. *Myrcia zetekiana* is known from wet forests of Panama and is also reported from Colombia, at an altitude of ca. 100 m.

IUCN Red List category. Authoritatively named specimens of *Myrcia zetekiana* recorded online suggest an EOO for this species of ca. 1500 km². Panamanian collections are from well-protected areas such as the Bosque de proteccion Lago Gatun, Soberania Parque Nacional, and Chargres Parque Nacional. *Myrcia zetekiana* is assessed as Least Concern (LC) according to IUCN criteria (2014).

Notes. *Myrcia zetekiana* has distinctive large leaves (to 30 cm) and large flowers (to 0.5 cm) as well as pubescent fruits. This species has been relatively well collected, although we have seen little material.

Selected specimen. PANAMA. Canal Zone, Hills W of the canal, near Gatun, *Standley 27192* (K).

INCOMPLETELY KNOWN SPECIES

We believe the following species may additionally be included in *Myrcia* sect. *Aulomyrcia* but lack sufficient data for certain placement. The holotypes of *Marlierea involucrata* (O. Berg) Nied. and *Myrcia panicularis* (O. Berg) N. Silveira were destroyed in B, and with no syntypes, specimens contemporary with the author, or other reliably named material available for reference, it is impossible to understand Berg's original concepts of these species and to provide

lectotypification or confidently place the species, though their protologues suggest they belong to *Myrcia* sect. *Aulomyrcia*. *Myrcia calycampa* Amshoff, *M. elevata* M. F. Santos, *M. gonini* McVaugh, *M. intonsa* (McVaugh) B. Holst, *M. ramageana* Krug & Urb., and *M. tafelbergica* Amshoff form a group of species from the Amazon basin and Caribbean with short pale to rufous hairs covering hypanthia and axes of the inflorescence. Holst (2002) discusses a calycampe complex that may correspond in some way to these species. It is difficult to assess the buds and flowers of these species from available material and images. They appear to have the flat disk and thick, hairy staminal ring associated with *Myrcia* sect. *Myrcia*; however, in fruit the hypanthium can extend significantly and tear. It will be important to include samples of them in future molecular-based analyses and equally important to bear these species in mind when considering further accounts of *Myrcia* sect. *Aulomyrcia*.

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